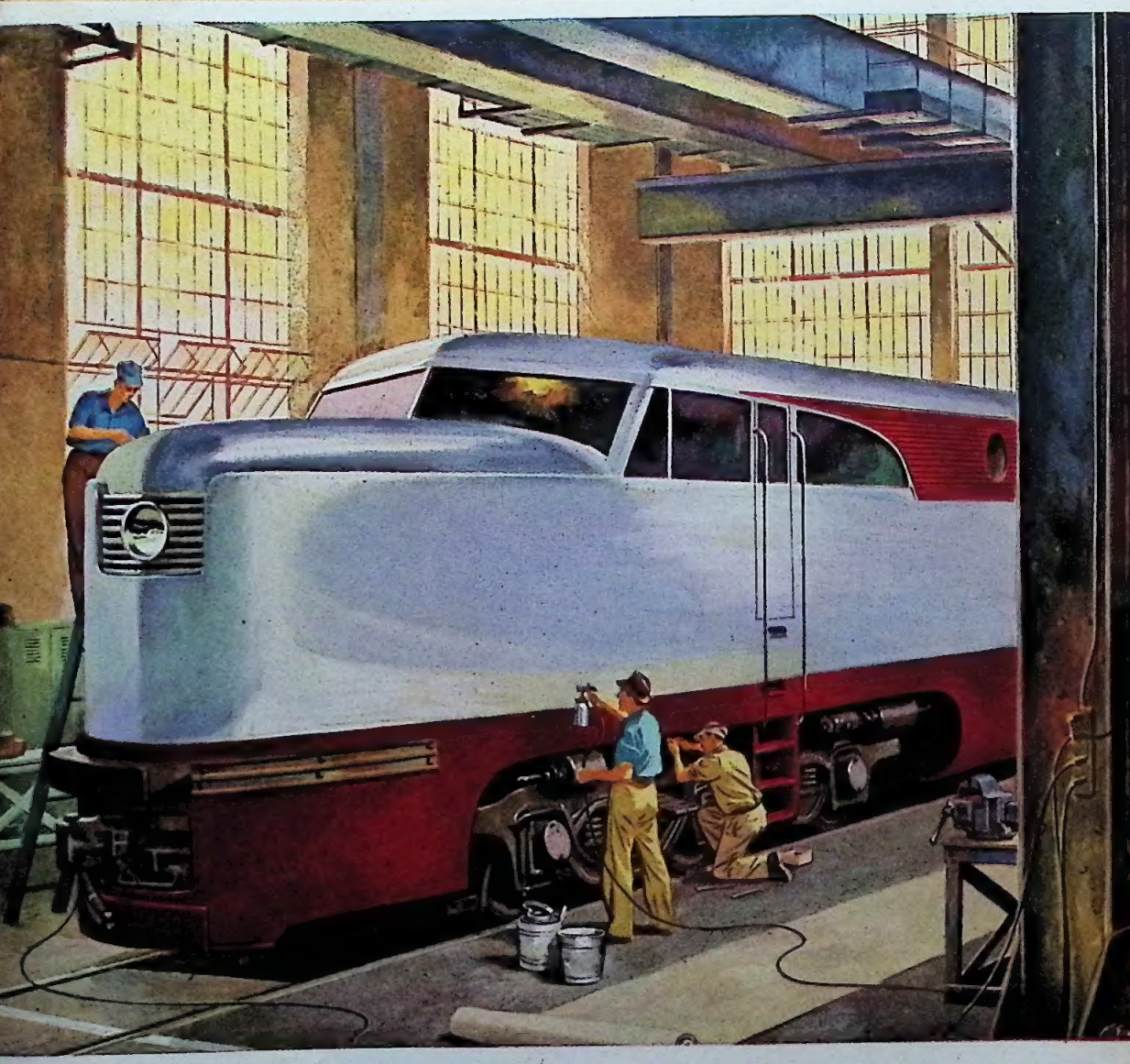
Trains

25¢

September, 1946



Southern Railway's Crescent

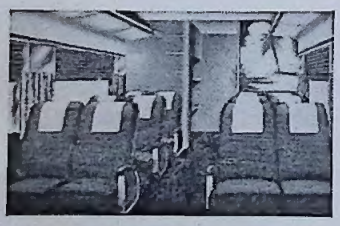
Photo-Story Contest

South African Railways

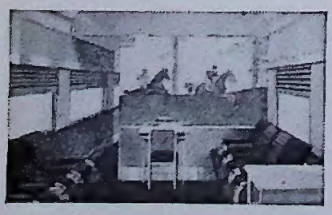
Short-Line Railroad Association

America's Newest Postwar Streamliners!

The diner, with extra-wide windows, luxurious appointments, semi-indirect lighting and handsome, full-length mirrors, where meals constitute a pleasant interlude.



What a pleasure to relax in this air-conditioned coach, with its restful, roomy seats that can be reclined, wide windows, and attractive color scheme of pastel tints!



You may read, write letters, enjoy sight-seeing, or just chat in comfort as you glide over the scenic L & N routes in this colorful lounge car.

LUXURIOUS . . . MODERN . . . ULTRA-COMFORTABLE
THE TRAINS YOU'VE HOPED FOR ARE HERE!

BUILT by American Car and Foundry Company for the Louisville & Nashville Railroad, two silver-and-blue trains of distinction will soon be streaking over the tracks between CINCINNATI and NEW ORLEANS, and between ST. LOUIS and ATLANTA.

They are the newest trains to be put into service since the war began. ACF and "The Old Reliable" both had one goal in mind: to make traveling safer, swifter, more comfortable and enjoyable than ever before—*and at coach rates!*

Speed? These all-coach trains will run on schedules substantially faster than present ones . . . and with safety.

Silence? There'll be a comforting hushed quiet inside as these trains eat up the miles.

Comfort? You'll be able to move the seats, recline at ease, lazily rest your feet as you ride.

Air Conditioning? Clean, fresh air of the proper temperature will flow through the trains in a never-ending stream.

Dining? Not only beautiful diners with scientifically-deodorized kitchens, but completely equipped, cozy taverns and tavern-lounge sections.

Facilities? From the extra-wide windows to the capacious luggage racks, from spacious washrooms to a public address system, these trains will bring many new conveniences to the traveler.

We are proud that one of America's great railroads, the L & N, has chosen ACF to build these trains as part of its program to bring you the newest and finest in transportation.

American Car and Foundry Co.
"Quality and Vision in Railroad Transportation"

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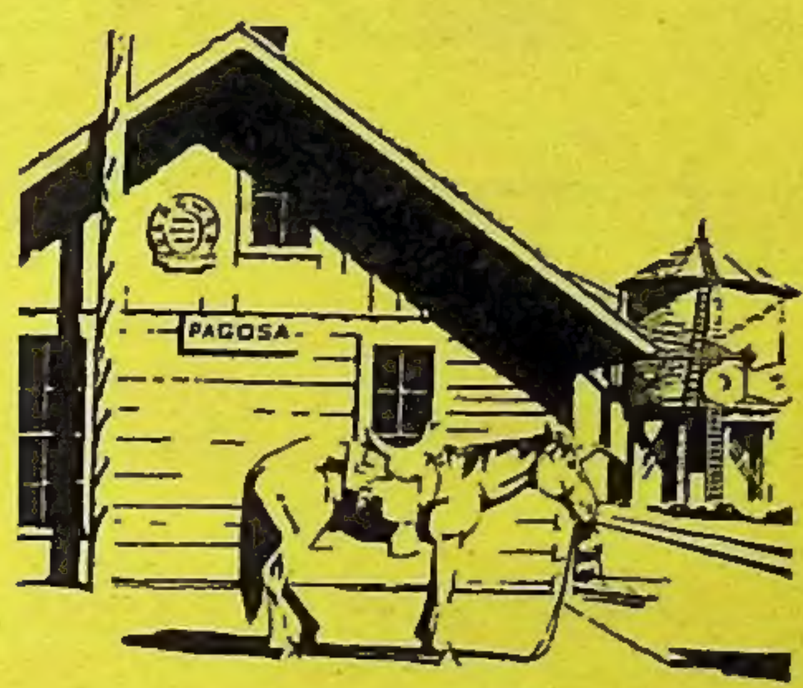

Volume 6, Number 11

September 1946

"Let all forms of transportation be placed on an equal, self-supporting basis — and each can then develop to the very limit of its economic usefulness. Under such a fair competitive policy, I am confident that you will see your railroads become constantly finer, faster, more economical and more efficient."—Gustave Metzman, president, New York Central System.

Cover Design. American Locomotive's Diesel paint shop. - 1

Railroad News and Editorial Comment. - - - - 5

To Washington on the Crescent. By Roy G. Clark. - - 10
Across the Piedmont on one of the South's great trains.

Photo Story Contest. Announcement. - - - - 18

American Railroading. A picture sequence. - - - 19
Today is the beginning of a new era in railroading.

Texas & Pacific 4-8-2. Locomotive specifications. - - 27

The Short Lines' Pilot. By Raymond Moody. - - - 28
The little railroads co-operate in working out their problems.

Railroads of South Africa. By J. D. Mahoney. - - - 34
Narrow gauge is standard and service is excellent.

Pageant of South African Railroading. Pictures. - - 39

Short Features. - - - - - - - 52

Railroad Mail. - - - - - - - 58

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Why must sleeping car passengers put up with "rolling tenements"?

9 Out of Every 10 Sleeping Cars Now in Service Belong in Museums! What Can Be Done About It?

ANYONE who ever takes an overnight train trip owes it to himself to read these facts:

The average age of the 6,800 sleeping cars now in operation is almost 22 years. Nearly 25% of them were built before the first world war. (Would you expect a comfortable ride in an automobile built between 1910 and 1915?)

Compared to really modern sleepers, these old cars are as out of date as high button shoes! And to ride in these jittering tenements on wheels, 25 to 35 years of age, the traveler pays a premium fare. Is it any wonder railroads are losing business to the airways and the highways?

What's the Reason?

Don't think this situation is due to the war. It existed long before the war. Only 900 sleeping cars—a mere 13% of those now on the rails—were built in the last 16 years, and less than 9% are of modern lightweight design.

With over 6,000 new sleepers needed, only 764 had been ordered as of June 1. These were ordered in small lots of varied design by 25 big railroads for their own use. (More than 30 other roads that operate sleeper service did not have a single sleeping car on order!)

Not only does this piecemeal method of buying mean that the new cars will be ill-fitted for through service; it is one of the principal reasons why they will cost four times as much per pound to build as an automobile.

Since last September, the C & O has tried in vain to get other railroads to agree on sleepers of standardized designs and to place sufficient orders so that all railroads can gain the economies of mass production.

Our efforts have been given no encouragement. We are tired of waiting and so are the travelers we serve. Apparently, the only way the C & O can get modern sleepers is to have its own built!

We Will Wait No Longer!

We of the C & O lines will not sit by idly while our night passengers travel in outdated rolling tenements. We are now inviting bids from manufacturers on enough modern sleeping cars to replace every sleeper on our lines, with a substantial margin to spare.

We have taken this step, independently, with great reluctance. To supply our own sleeping equipment, it is necessary to buy not only enough cars to meet our routine requirements — but with no pool of modern equipment to call upon, we must also provide for seasonal and other peaks.

This is not the most economical way to secure modern sleeping car service. But, as far as we can see, it is the only way open to us.

The C & O Repeats Its Offer!

The present situation is plain bad business. People want modern equipment. They have shown themselves eager to travel on the railroads that provide it. Even before the war, new lightweight streamliners were packed to capacity on routes where their old-fashioned predecessors had traveled half empty.

The demand for travel accommodations has never been greater than it is today. Yet ancient sleeping cars still clutter up the rails while the airways and highways shine with new models. It doesn't make sense!

The need is self-evident for an efficient, new sleeping car operating company which can and will buy modern cars competitively in quantity and service them economically. The past record of America's only sleeping car operating company offers little encouragement that it will fill these needs. We will gladly release all the new cars we purchase to any independently operated pool that will demonstrate an interest in making modern sleeping car equipment available to all railroads, at reasonable cost. If the other roads will do as much, it should be easily possible to attain this objective.

What roads will co-operate in this drive to give the traveler better service at lower cost?

The Chesapeake and Ohio Lines

Terminal Tower, Cleveland 1, Ohio

CHESAPEAKE AND OHIO RAILWAY
NICKEL PLATE ROAD
PERE MARQUETTE RAILWAY

On the Monon the Answer is Now "Yes"

A railroad to watch is the Monon. Under aggressive new management this entire 545-mile line, with its main lines crisscrossing Indiana from Michigan City to Louisville and from Chicago to Indianapolis, will be modernized to an extent never before attempted on an entire system. John Barriger, the new president, expects to make the Monon into America's first "super-railroad," which means maximum grades of only five-tenths of one per cent, maximum curves of one degree, or about one-mile radius, centralized traffic control, radio train communication, freight classification in a minimum number of car retarder yards, crushed rock ballast, heavy rail, and everything else to match. On such a railroad passenger trains will operate at sustained speeds of 100 miles an hour, and maximum-length freight trains at 70 miles an hour.

Things have already started to happen on the Monon. Of first importance to an Indiana public which loved it, the "5 o'clock Monon," late afternoon passenger train between Indianapolis and Chicago, is back on the timetable. The new management, in since May, expected to get passenger service back on at least a prewar basis immediately, but had to search as far as California for the coaches. Once they were obtained, no time was lost putting the trains back in service on faster schedules than ever. As soon as Pullmans can be had, early in September, the night trains between Louisville and Chicago, with sleepers for French Lick Springs, will be restored. Furthermore, Barriger believes that the I. C. C. formula splitting fixed expenses of the railroad between passenger and freight service does not truly reflect passenger earnings. He says, "As long as we must maintain the road anyway for freight, let's run any passenger service which more than pays operating expenses. If it contributes anything at all to fixed expenses we are still ahead. And good passenger service builds good will and is a valuable advertisement."

A baby streamliner will be used to restore passenger service on the Michigan City branch, freight-only since post World War I days. A daytime streamliner will round-trip between Chicago and Louisville and several will do the Chicago-Indianapolis run. The night business will be served by all-room sleepers. But even when the Monon gets its new streamlined passenger cars, and it expects to order 35 cars soon, the old equipment will be kept rolling. Excursion trains, including railfan specials and week-end trains to Indiana beauty spots, will be run at any possibility of collecting fares. Harry Willis, general passenger agent, shakes his head in bewilderment at the turn of events and recounts how he was so used to saying "No" to all requests for special movements that he finally thought of putting a sign on his office door, "Come in if you must, but the answer will be 'No.'" On the Monon the answer is now "Yes."

Freight Trains on Timetable

Freight service has already been put on a regular timetable basis, and the operating department has orders to run every scheduled freight train, just as it does scheduled passenger trains, whether there is anything to put between engine and caboose or not. Previously freight trains were run only when sufficient tonnage accumulated to justify a heavy train.

The new timetable was a bold stroke, setting up train service far in excess of what traffic would support, but already carloadings are increasing so rapidly that several extras have been needed. The traffic department of the road has been given something to sell and has been put on its merit to get out and sell enough business to justify the improved service. "From this point forward," says Barriger, "we are all of us on the Monon working for the traffic department, to run a railroad according to what the shippers and travelers want."

To rebuild the railroad according to super-railroad standards will be a tremendous physical task, even though the Monon already has some solid assets such as the fourth longest tangent in America, over 60 miles between Westville and Brookston. Tortuous grades down into the valley of Indiana's famous rivers — the Wabash, the Tippecanoe, the White and others — must be replaced by long heavy fills and high-level bridges which will carry the track straight over the valleys. A tunnel may pierce the limestone beneath Bedford to cut off a summit. Many an inexplicable curve in flat farm land will simply be unkinked by cutting across the corn or soy bean fields. The result will be a line over which the 158 miles from Hammond to Boulevard Station, Indianapolis, can be run safely and comfortably in two hours flat.

Rolling stock and motive power will require not only a rehabilitation program on present equipment but the purchase of large amounts of new equipment. Chief Mechanical Officer Frank Cheshire, formerly of the MoPac and during the war a colonel in the Military Railway Service, will have his hands full pushing old coaches through the Lafayette shops and making them as attractive as possible, getting steam locomotives into reliable operating condition, repairing bad-order freight cars, and all the while supervising the hundreds of details in ordering new equipment of every type.

Motive Power Program

The motive power roster now includes 72 steam locomotives, all relatively old, and four Diesel switchers. Horsepower totals slightly under 200,000. Because of the greater daily mileage which a Diesel-electric can deliver, the Monon figures present service could be

The paper stock in this issue of TRAINS *is not our usual standard. The acute shortage of high-quality coated paper has forced us to substitute. We hope to be back on our usual high-grade paper soon.*

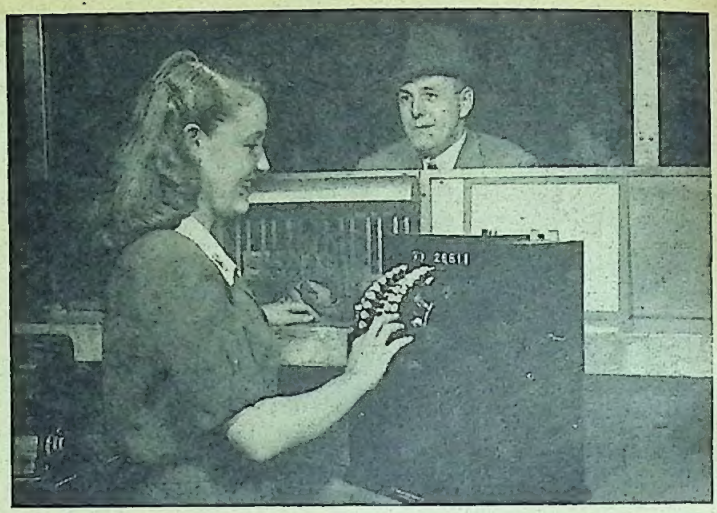
handled by about 75,000 Diesel horsepower. Some 40,000 horsepower of Diesel-electrics are now on order. More will be ordered. But the traffic department is setting its sights for enough business to not only keep the new Diesels busy, but also the steam locomotives. Eventually Barriger hopes to convert the entire road to electric power, meaning Diesel-electric or the new gas turbine-electric. He quite accurately refers to the Diesel as "an electric locomotive which carries its own generating plant on its back."

All this sounds like an almost impossibly big program for such a small railroad, and indeed it is. The I. C. C. valuation of the Monon is about $25 million. In the next five years the management expects to spend an equal amount on improvements, including $8 million for Diesel power, $3½ million for passenger cars, $8 million for freight cars, and the balance for rail, signaling, grading, new bridges and all else that goes to make a railroad, not forgetting Recordak for waybills and accounting machines and typewriters.

But impossible as it may seem, the owners are backing up the program, the directors are enthusiastic about the possibilities of making a paying proposition out of a fully modern railroad, and the entire organization is alive with the knowledge that it is helping to make railroad history. Work crews are on the line laying rail and tamping crushed rock, and surveyors roam the hills and valleys near the right of way. By next spring the dirt will fly.

Always Wanted to be President

Spark-plugging all this is a human dynamo, John Barriger, at 46 the youngest Class 1 railroad president in the country. He combines in an unusual degree business acumen, engineering ability, incredible knowledge of railroads, and a human quality that endears him to his men. He goes tirelessly up and down the line, making as many as eight speeches in three days before shipper groups and other meetings, and always preaching his gospel, that grades and curves cost a railroad more than all the featherbed rules and tax inequalities combined. This gospel, expressed in his article "Super-Railroads" (Dec. '43 TRAINS), sold the new Monon owners on the idea of making their road into a super-railroad, and of course Barriger was the logical man to do it.



To provide better service to passengers, the Long Island Railroad has installed ticket-printing machines in its Pennsylvania Station ticket office in New York.

He does it, with enthusiasm. All his life he has wanted to be a railroad president, and his training in the Pennsylvania organization, at M. I. T., as railroad director of the R. F. C., as associate director of the O. D. T., as federal manager of the TP&W, has all fitted him for the job. He says the Monon is "small enough to be fun, big enough to be interesting."

This is one railroad president who stops and talks to anyone on the line, listening eagerly to suggestions and criticisms. As one station agent said after Barriger had dropped in and looked through the waybills, "I've been with this road 27 years and this is the first president I've ever seen. He comes in often and looks over the traffic, shipper by shipper." And the shippers know this persistent railroad president as well. Ask Traveler Radio Company of Orleans, Ind., where Barriger stopped his traffic department special, introduced himself and the traffic men, had them shown through the radio factory, and then walked out with an order to place a box car next morning at this plant, which had been shipping exclusively by truck. Or picture the flabbergasted newspaper editor in Salem, Ind. (population 3194), where Barriger stopped his train to thank the editor for a favorable editorial. Of 2000 employees, Barriger estimates he now knows 1000 by name and hopes to know all in a few months.

The super-detailed plans for the Monon are admittedly visionary and long-range. The new owners realize that even the best of service can immediately get them only a larger slice of existing traffic. But they also believe that better service will in the long run build up more total traffic in their territory, that industries will prosper on the Monon, and that better schedules will build up the volume of gateway traffic, especially through Louisville. Whether all this works out can hardly be accurately foretold, but if the new Monon does not prove a tremendous success it won't be for lack of persistent, personal, on-the-spot management by one John Walker Barriger.

Mr. Young Is At It Again

Robert R. Young is at it again. Quiet, unassuming, of conservative dress and manner, but a hard-hitting fighter when he feels the occasion demands it, Mr. Young has inaugurated on his C&O-affiliated Pere Marquette Railway the first streamlined trains to be built all-new since the war. Powered by Electro-Motive, the two new Pullman-Standard *Pere Marquette* trains are the last word in railroad passenger accommodations, providing thrice-daily, twice-Sunday high-speed service each way between Detroit, Lansing and Grand Rapids, Mich.

An innovation allows the traveler to reserve his seat by telephone and to board the train without standing in line at the ticket office to pick up his ticket; the passenger agent will sell him his ticket right on the train. New, too, are the pretty waitresses who, after a pre-streamliner training period on the same run, have replaced the traditional male waiters in the tavern-dining cars. Matching the trains in beauty and making one feel as comfortable as do the new Sleepy Hollow reclining chair seats in the coaches (the first installation of these scientifically designed chairs), these young ladies add to the pleasure of travel. They can perform the ticklish feat of carrying trays full of sloshing liquids without spilling a drop. And although service on the *Pere Marquettes* is of the type you'd gladly pay extra for, rates are standard and tipping is not allowed.

Operation of the trains is aided by radio communication between conductor and engineer and between the train and the Grand Rapids station, which is now 40 minutes closer to Detroit.

Locomotive in Hotel

The cover this month shows one of the new American Locomotive Company road Diesels in the erecting shop at Schenectady. The first of this entirely new design is now being completed for the Santa Fe and in about a month will be unveiled and exhibited in the Waldorf-Astoria Hotel in New York City, on a little-known presidential special siding.

New Frontier?

Most of us have believed that the era of railroad building was finished, and that what remains is largely improvement and refinement of the railroad plant. But a public notice in Georgia newspapers, which is very reminiscent of half a century ago, tells of plans to build a new short line railroad line between Atlanta and Savannah and asks help of citizens of counties which the line would serve.

The length of the new road is quoted as 229 miles, as against 293.7 on Central of Georgia. The proposed line promises reduced rates due to shortened distance, through freight service, Diesel-powered streamlined passenger trains. Of course, it takes more than plans and even promises of support to build a railroad these days. The I. C. C. must grant permission, weighing public convenience and necessity and taking into account the loss of revenue to existing routes which may in the long run hurt transportation more than the new line would help. [For a discussion of similar cases before the Commission see "The Commission Says Yes," May '45 TRAINS.]

Railfan Trips

September 1: From Niagara Falls, Ont., on Niagara, St. Catharines & Toronto electric line. Sponsored by the NRHS of Buffalo.

September 15: Springfield Terminal Railway, Springfield, Vt. Write Howard Johnston, 78 Sandford Avenue, Plainfield, N. J.

September 22: From Washington, 9 a. m., to Baltimore (leave 10 a. m.). Relay, Elicott Mills, Brunswick Yard, B&O. Cost $2.30, half for children. Minimum of 300 needed. Write C. L. Butler, 4623 31st Road S., Arlington, Va.

September 29: Oakland, Calif., over local lines of Key System in ex-Lehigh Valley Transit car. Fare $1.50. Write Bay Area Railfans' Association, 2161 Shattuck Avenue, Berkeley 4, Calif.

October 6: East Broad Top. Write Howard Johnston, 78 Sandford Avenue, Plainfield, N. J.

October 13: New Haven to Northampton over New Haven's "canal line." Fare $4. 125 reservations needed. Write Edward G. Kelly, 411 Shelton Avenue, New Haven 11, Conn.

October 20: From Jersey City Exchange Place station, Pennsylvania Railroad, 10 a. m. Multiple unit fan trip which was postponed earlier in season because of coal strike. Off the beaten path route, including Harsimus Cove freight terminal, Meadows enginehouse, South Amboy yards, then over historic Camden & Amboy. Fare $2.75 if paid before October 14 to the Electric Railroaders' Association at 51 W. 35th Street, New York, N. Y.

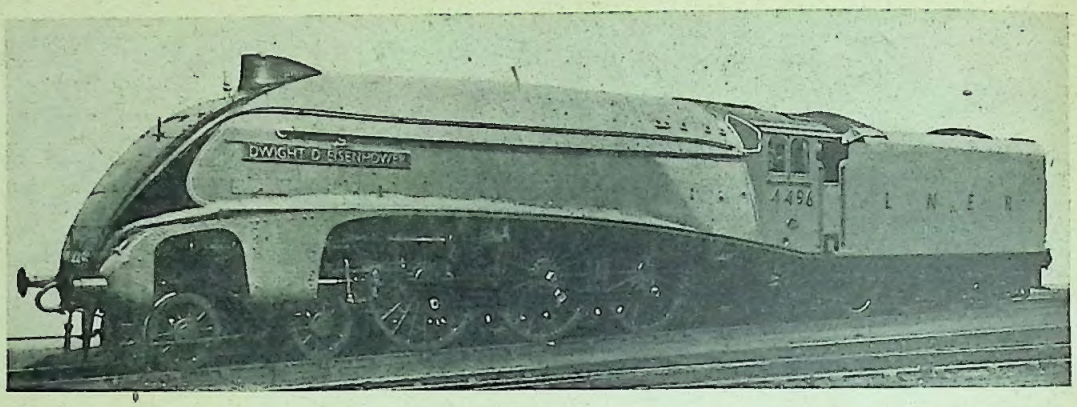
Odds and Ends

Work has been started at the Pullman-Standard plant on the first of 31 new coaches for Illinois Central. These will equip the new Chicago - New Orleans daytime streamliner and will re-equip the *Daylight* and *Green Diamond* on the Chicago-St. Louis run. . . . New uniform color scheme for Illinois Central passenger cars is rust brown, yellow stripes and orange band, same as *Panama Limited*. . . . Pullman-Standard has finished 100 passenger cars since war's end, in spite of shortages of many kinds of air conditioning, electrical and other car parts. Twenty cars were for North Western, 80 for New York Central. More than 100 more cars are stored, almost finished, waiting for vital parts.

All Union Pacific mainline passenger trains, with two minor exceptions, are now operated by oil-burning steam locomotives or Diesel-electric units. The recent coal strike spurred UP into changing 45 4-8-4 locomotives from coal to oil fuel. . . . Happy days are here again! For the past month NYC and D&H joined in running week-end special trains to Saratoga Springs for horse racing fans. . . . Chesapeake & Ohio is building a new 14-mile branch on the Kentucky-Virginia state line to serve a coal mining operation. The road will include one 3400-foot tunnel and when fully developed is expected to carry over one million tons of bituminous coal a year.

Directors of the Missouri-Kansas-Texas are meeting at various points on the railroad in order to familiarize them with the line's territory, its employees and the Southwest in general. . . . Relaying of 350 miles of track in six states features

New 1500-horsepower Diesel-electric locomotive unit built by the Ingalls Shipbuilding Corporation. It can be used for switching, passenger or freight service.



London & North Eastern 4-6-2 named Dwight D. Eisenhower in tribute to the Commanding General in the European field.

Union Pacific's 1946 improvement program. Majority of projects involve 131 pound rail. . . .The new L&N Cincinnati-New Orleans train will be named the *Hummingbird* and the new L&N-NC&StL St. Louis-Atlanta train will be the *Georgian*. Names were selected by a double prize contest.

Electric Railroading

August 7 was the 20th anniversary of Illinois Central electric suburban service in Chicago. In its 20 electrified years the IC suburban service has carried 750,804,130 passengers, run 3,232,804 trains, and last year used enough electricity to supply 110,000 homes. Track mileage is 131, serving 54 stations. Greatest load was 212,-315 passengers in one day at the time of the American Legion Parade during the 1933 Fair. . . . Winona Railroad, freight only, one of Indiana's last interurbans, has petitioned to abandon the south 41 of its 62 miles.

The Bay Area Railfans' Association, 2161 Shattuck Avenue, Berkeley, Calif., has purchased another interurban car to preserve. This is the observation car No. 751 from the recently abandoned Salt Lake & Utah. It will be kept with the Napa Valley No. 53 at the Sacramento Northern shops in Chico. . . . On a recent fan trip the Railroad Society of Milwaukee traveled over 60 miles of the Kenosha Motor Coach Lines. This isn't as bad as it sounds, for the fan trip covered the Kenosha and Port Washington interurban lines, purchased by the bus company from Milwaukee Electric Lines. . . . Speaking of busses, Greyhound owns an interest in the newly reorganized North Shore Line and has two directors on the board.

Foreign Railways

Great Western Railway of England is experimenting with American type flat bottom rail in place of the standard English bullhead rail. Some 38 miles of track have been relaid with 113-pound and 110-pound rail spiked to ties with elastic "swan necked" spikes. The bullhead rail is set into cast iron chairs which in turn are lag screwed to ties. . . . American Locomotive Company has an order for 10 2-10-0 type steam locomotives for the Finnish State Railway. . . . With regular services restored in Holland, the Netherlands Railways has turned its attention to a different kind of timetable, a schedule for complete electrification of the 2000-mile system. Final completion is set for May I, 1951.

New Southern Trains

The Southern Railway has ordered 147 new lightweight streamlined cars to re-equip four of its trains at a cost of $15 million. The *Crescent* between New York and New Orleans, the *Royal Palm* between Florida and Detroit, Cleveland and Buffalo via Cincinnati, the *Southerner* between New York and New Orleans, and the *Tennessean* between Washington and Memphis will all be furnished with new cars. Some of the streamlined equipment now used in the *Southerner* and the *Tennessean* will be passed on to other Southern trains.

Since other railroads, Pennsylvania, New York Central, Atlanta & West Point, Florida East Coast, and Louisville & Nashville, share in the operation of three of the trains the equipment cost will be borne jointly on a mileage basis. President Ernest E. Norris of the Southern said that the new cars "reflect the Southern's desire to proceed as rapidly as possible with its extensive betterment program which the war interrupted.

"We want to give our customers the finest service possible, but it takes money to do that. With our present inadequate rates, and greatly increased wage, fuel and other costs, it is impossible even to make ends meet. Thus, we are looking hopefully to the Interstate Commerce Commission for an early and favorable decision on the railroads' petition for a 25 per cent increase in freight rates. On that decision will depend how far and how fast we can progress our improvement program, if at all."

Saga of a Lower Berth

Coming into Buffalo one morning I overheard the porter calling the woman in the next section. "I won't get up," she said. "I've paid for a night's sleep and I haven't had it yet."

"Well," answered Herbert (we can't call Pullman porters George!) "in half an hour we'll be in Buffalo station, and then this car gets switched to the yards. That's no place for a lady."

But the lady insisted she had paid for a berth all the way to Buffalo and that she intended to occupy it. Occupy it she did right into the station. I don't know what happened after I got off, but I've wondered since how she liked the yards.

A. C. Kalmbach.

The "5 o'clock Monon" is back

AN OLD FRIEND

BY JOHN W. HILLMAN

. . . . Someone should start a movement to restore the 5 o'clock Monon which was discontinued a week ago. We owe that to posterity.

On the timetables, that unique train was called the *Hoosier*. But to Indianapolis, it was simply "the 5 o'clock Monon." That was identification enough, for everyone here knew it and most had ridden on it to Chicago, not once but many times. And it was as much a part of Indiana as basketball, the statehouse, fried chicken or the Circle.

To understand Indiana, one should have made at least a few trips on this historic carrier. It had that family atmosphere which develops on an ocean cruise after the second day out. The faces across the aisle were familiar, the names you heard mentioned were those of your friends, or friends of your friends. There was none of the don't-speak-to-strangers stiffness of an ordinary train — this was just part of Indiana which happened to be moving in the same direction at the same time. . . . This then was the 5 o'clock Monon. It was more than a train; it was an institution and a tradition in Indiana.

From the Indianapolis Times, March 5, 1945.

WHEN Indianapolis lost its 5 o'clock Monon train to Chicago two years ago, the whole city mourned. For the "5 o'clock Monon" was a Hoosier institution. It was more than a train. It was a way of travel.

Now the "5 o'clock" (actually 5:15) is back, on a faster schedule than ever, with air-conditioned parlor car and coaches and featuring the famous Hoosier dining car service. This typifies the new aggressive management of a road which is small enough to give friendly, personal attention to each traveler and shipper, large enough to create good service.

Along with the restoration of full passenger service the Monon put on a full complement of fast-scheduled freights offering overnight service between all points on the road.

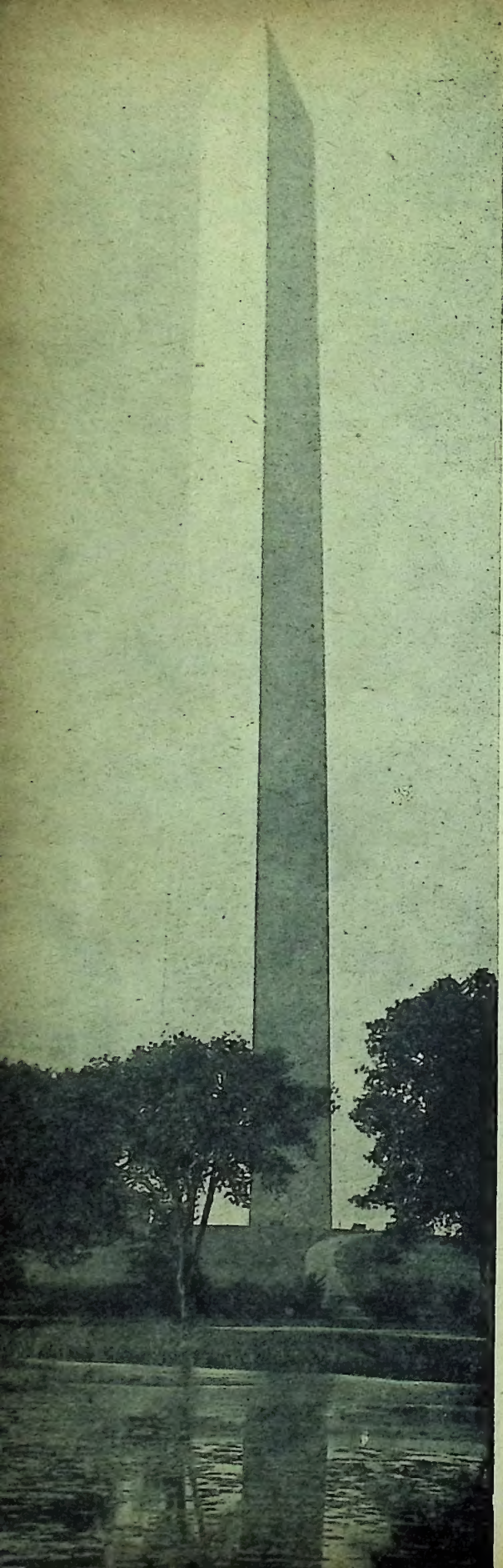
And that is only the beginning! Watch the Monon.

For a travel sensation, ride the Monon.

For shipping satisfaction, route your freight via Monon.

THE MONON ROUTE

Chicago, Indianapolis & Louisville Railway



To Washington on the Crescent

BY ROY G. CLARK

Can you be in Washington tomorrow?" the telegram asks. Only the Western Union folks know how many millions of similar messages have gone out from our nation's capital these past five turbulent years. But even the Western Union can't say how many men have grown gray overnight trying to get Pullman reservations there on a few hours' notice.

However, we're lucky this time and at 1:30 p.m. we arrive at the Atlanta Terminal Station with a little pink ticket for Lower 4, Car 94, and with five minutes remaining for us to look over the Southern's *Crescent Limited,* the all-Pullman job that will carry us to Washington.

Up ahead our big Diesel-electric is chattering, its 4000 horses champing at the bit. Walking back, we count a postal car, a combination club car, 3 Washington Pullmans, 2 New York Pullmans, the diner, then 3 more Pullmans for New York and, on the end, a room observation car — a dignified and solid train of 12 cars with no emergency hodge-podge equipment stuck in here and there, as is so often the case these days.

The *Crescent* is the modern version of the *Washington & Southwestern Vestibuled Limited,* inaugurated in January, 1891, and the pioneer through train between New Orleans and New York. The first all-year train in the South to carry vestibule equipment, it soon gained the nickname of the *Vestibule* and folks used to spend lots of time walking from car to car just to enjoy the thrill of being able to do so without losing their hats. It was the first train, too, to operate dining cars between Atlanta and New York. The route then, as now, was Louisville & Nashville from New Orleans to Montgomery, West Point Route to Atlanta, Southern to Washington, and Pennsylvania Railroad to New York.

From Atlanta to nation's capital is a pleasant jaunt on Southern's all-Pullman Limited

Copyright Harris & Ewing.
Courtesy Southern Railway.

The "all aboard" call tells us to get into our car. The *Crescent* slips out of the terminal station, runs parallel with the Union Station tracks for about a mile, swings to the right and crosses the tracks of the Nashville, Chattanooga & St. Louis. In 10 minutes we're at Peachtree Station, popular suburban point of departure for northside Atlantans. Many a harried postwar traveler jumping aboard at the last minute, but without a Pullman ticket, has joyfully noted the empty sections when his train left the downtown terminal only to have all hope dashed when the crowds flocked aboard at Peachtree Station.

We're winding now through Atlanta's northside residential section, reputed to be equaled in gracious beauty only by Chicago's famed North Shore region and New York's Westchester County region. A mile or so farther on and we're starting up a stiff short grade to Oglethorpe University Station. This brings to mind the nights we've listened in bed, in our near-by home, to the diminishing rumble of the heavy tonnage freights as they worked this grade. We've strained along with the big Santa Fe's as their exhausts slowed down to less than 50 a minute, finally topping the crest at 10 miles an hour, and we've relaxed with them as they rapidly accelerated after getting over. Today our Diesel with its reserve power slips over the top in an effortless stride.

In an hour we're at Gainesville. We cross the wavery track of the Gainesville Midland, a picturesque Georgia short line, and, as we swing around a curve, we catch our first glimpse of the hazy Blue Ridge Mountains to the west. We'll see these mountains most of the afternoon, but we'll be running parallel with them and will never enter them.

Now that our tickets have been collected, let's go to the club car and look over this Southern layout. We're traveling on the main stem of the entire system, a double-track line that

Frank Clodfelter, 9 Plymouth Circle, Asheville, N. C.

extends from Atlanta to Washington in a tree-trunk fashion, its diverging lines extending from both sides like a tree's branches. Since pre-Civil War days, this historic route has been the most vital artery of commerce and traffic in the Piedmont states. Along it the Battle of the Wilderness was fought between Manassas and Orange; and during the tragic closing days Jefferson Davis fled southward over what are now Southern rails.

Today the line is jam-packed with a great diversification of traffic. From Greenville northward it traverses the fabulous cotton country, and later this afternoon we will pass mill after mill with bewildering regularity, and we'll recognize that the slogan "a mill a mile" is no exaggeration. Bananas from New Orleans, oil from the Southwest, manufactured products from Atlanta, and general freight from the prosperous cities on the route keep the Southern's rails bright and shiny.

The Southern is the only American railroad that offers three optional through routes between two major cities more than 1000 miles apart. The traveler from New Orleans to Washington may ride Southern rails all the way if he chooses the luxurious coach streamliner, the *Southerner,* via Meridian, Birmingham and Atlanta. Or he may take the *Crescent,* our train, and proceed via Mobile, Montgomery and Atlanta, in which case he'll be on Louisville & Nashville and West Point Route rails for a good part of the trip. On a third alternate route, he may go via Birmingham, Knoxville and Roanoke, riding the heavy and curving rails of the Norfolk & Western between Bristol and Lynchburg. The *Southerner* makes the fastest time, with the *Crescent* taking almost three hours longer. The Birmingham-Knoxville-Roanoke route requires two nights on the road and is much slower.

But back to the double-track Atlanta-Washington line, which is equipped with automatic block signals all the way and with automatic train stop control between Spencer and Atlanta, 306 miles. The terrain is rather rough throughout since the line runs parallel with the mountain ranges and therefore must cross all the rivers and divides which extend toward the ocean. Going northward the ruling grade is between Monroe and Charlottesville (the general locale of the wreck of the old No. 97, famed in song and story), and steam-powered passenger trains with more than 13 cars must be double-headed. Our Diesel will take the *Crescent* over the hill without help, even though

The Crescent approaches CR Tower near Alexandria, Va., northbound for Washington. Before Dieselization, the Crescent was pulled by a 4-6-2 (below). In this 1938 scene the famous vestibuled train speeds through a sleepy South Carolina town near Greenville at 60 miles an hour.

W. H. Thrall Jr., 5839 Montebello Ave., Los Angeles 22, Calif.

Frank Clodfelter.

we'll have 15 cars after we leave Greensboro tonight; Charlotte, Raleigh and Asheville Pullmans will be added before then.

After we leave Lynchburg late tonight we'll be on a mighty busy piece of passenger line. Twelve daily through trains travel in each direction, not counting the fleet operated by Chesapeake & Ohio, which has trackage rights for its trains over Southern rails from Orange to Alexandria, Va., just across the Potomac from Washington.

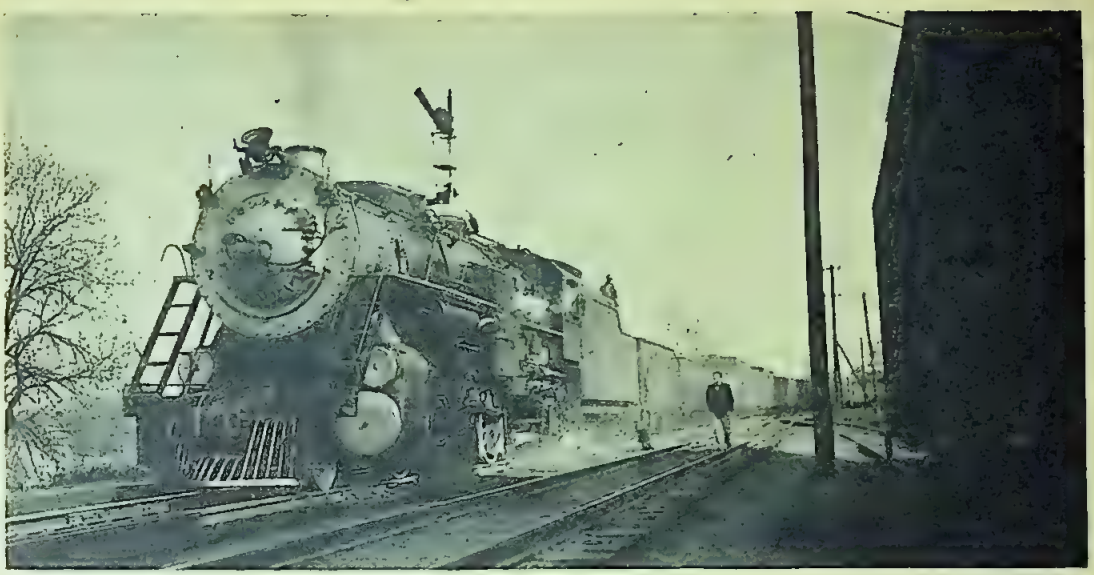
Every railfan remembers the song hit of yesteryear, "Chattanooga Choo Choo," with its alluring line, "Dinner in the diner, nothing could be finer." It was a Southern diner that this song writer, Harry Warren, was referring to, as the hit was written shortly after he had taken a trip on the Southern's *Birmingham Special*. Let's enjoy one of the Southern's fine steaks now, which, with the rest of the meal, will convince us that Warren was right.

At 10:45 we're at Danville, junction point for the lines to Richmond and Norfolk, and it's time to go to bed. While we're asleep, our car, with several others, will be set off at Washington at 4:30 a. m., and the Washington Terminal switch crew will do it so nicely we'll never wake up. Incidentally, the *Crescent* will have covered the 637.5 miles from Atlanta at an average speed of 42.7 miles per hour — an average that undoubtedly will be stepped up as traffic levels out.

In a way it's too bad that we're riding the *Crescent* to Washington, because we'll miss the always-new thrill of first seeing the Washington Monument and the Capitol dome as we swing over the Potomac bridge. And we'll miss the interesting view of the river from the bridge as well as the trip through the Washington tunnel that burrows right past some of our best-known government buildings. But we'll see all that when we go back to Atlanta on the *Crescent*.

Incidentally, we learn that neither the Southern nor its tenant the C&O, gets into Washington on its own rails. Going northward, Southern ownership ends at the junction with the Richmond, Fredericksburg & Potomac at Alexandria, on which line it has trackage to the south end of the bridge; the Pennsylvania — that big old man that gets everywhere — owns the bridge and the tracks to the tunnel's south portal. The tunnel and tracks into the station are owned by the Washington Terminal Company, which, in

W. T. Reid Jr., P. O. Box 876, Macon, Ga.



W. H. Thrall Jr.

Our Diesel-powered Crescent is by no means the only train on the route to Washington. As we loll in air-conditioned comfort we can see from our window a great railroad at work. Above, a 2-8-2 starts a heavy train bound from Orange, Va., to Charlottesville, Monroe, and points south. Below, a switcher gives a helping hand to a freight at Spartanburg, S. C., where the Southern Railway makes connection with the Clinchfield Railroad. This line runs north 277 miles from Spartanburg to Elkhorn City, Ky. View on opposite page was taken on Atlanta-Brunswick Line as a 2-8-8-2 snaked a heavy freight toward Atlanta.

Capt. Alex. L. H. Darragh.

turn, is owned 50 per cent each by the Baltimore & Ohio and the Pennsylvania.

Huge, sprawling Washington Union Station is operated by the Terminal Company, whose tenants are the Baltimore & Ohio, Chesapeake & Ohio, Pennsylvania, RF&P and Southern. The roads from the south enter by tunnel and use the lower level tracks, while the B&O and Pennsylvania come from the north onto the upper level stub tracks. The number of trains entering and departing on the upper level is bewildering to a visitor from the hinterlands where two or three trains in the station at one time is something to talk about.

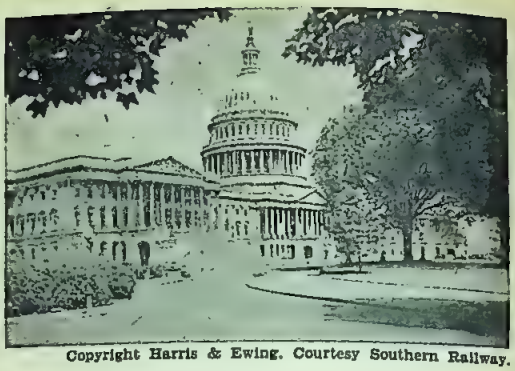
We leave our Pullman at 7:30 and crowd into a taxi that makes four other stops before it eventually deposits us at the Hotel Washington, just across from the Treasury Building and only a stone's throw from the White House grounds. After breakfast we spend several hours telephoning to secretaries, assistant secretaries and, it seems, secretaries to secretaries, only to find that we're wanted tomorrow, not today.

We decide to go sight seeing. Washington always has something additional to show every visitor, no matter how many times he goes there. Where to start? The White House, of course. Some way or other, it's second home to every American and it's the spot to which almost every visitor instinctively turns first. Despite its pretentious exterior, it is home for ordinary folks, just like you and me, and its whole atmosphere is as typically U. S. A. as ice cream or pumpkin pie.

Abigail Adams hung the family wash in the East Room, Andy Jackson hung up his stocking there for Santa Claus on Christmas eve, Grover Cleveland married his beautiful bride there and Teddy Roosevelt's children walked the stairways on stilts.

Peering through the high fence into the grounds, thinking perhaps to catch a glimpse of the President — and who hasn't hoped this? — we recall that when it was built in 1792 it was not called the White House. In fact, it was not white then, being constructed of Virginia gray freestone. White finish and paint came along in 1815, to cover the smoke stains remaining after it was partly burned by the British. Originally a nickname, the White House designation has today become as fixed and official as the name of the Treasury Building, the Capitol or any other Washington edifice.

But today is not visitors' day at the White House, so we walk through the Mall, passing the famous park bench where elder statesman Bernard Baruch held his portentous conferences during the early days of the late war. In a few minutes we've reached the base of Washington Monument, known to every schoolboy in the nation. Looking up from the base, the shaft seems to swing in the wind, but that's an illusion. We're doing the weaving and swinging, brought about by trying to maintain our equilibrium while craning our necks. We recall the time, more than a few years back, when we came to Washington on a vacation and proved our prowess to our friends by climbing the stairs to the Monument's top, 555 feet. Today we take the elevator.



Copyright Harris & Ewing. Courtesy Southern Railway.

The view from the parapet at the top is always new, always breath-taking, no matter how many times one goes up. Nowhere else in Washington, not even in a plane, can one catch the broad conception of the Washington Plan as laid out by the French engineer L'Enfant back in the 1790's. No other American city has grown and expanded in accordance with blueprints made more than 100 years ago. And the results have been very much worth while. Washington has a symmetry, a completed design, that no other American city can match.

The Monument's cornerstone was laid in 1848 and the money to begin the work was raised by popular subscription. When a height of 152 feet was attained in 1855 the money ran out and the partly completed structure stood as it was until 1878, when Congress appropriated the funds to complete the work. The capstone was put on in 1885, and it is interesting to know that Robert C. Winthrop, one of the originators

Like a green flash, train 35 thunders through the interlocking plant at CR (Cameron Run) Tower, Va., as it heads for the deep south from Washington with a Class Ps-4 Pacific at the head end. Above, the Capitol of the United States.

Railroad interest in the Washington area

In the city: Union Station. Best hours are before 9 a. m. and late afternoon, when most through trains are arriving or leaving. Take B&O or George Avenue car line to B&O's suburban Silver Spring station to see impressive parade of westbound streamliners between 5:44 and 6:04 p. m. Or see the terminal throat trackage from New York Avenue.

One day railroad trips: Round trip to Purcellville on Washington & Old Dominion. Trip can be made either morning or afternoon, departing Rosslyn, across the river from Washington, either 6:15 a. m. or 1:55 p. m. Round trip on Pennsylvania Railroad to Pope's Creek over pretty rural branch. Leave Union Station 8:10 a. m.

Interurban: Ride the Cabin John suburban trolley.

of the idea for the Monument, delivered the oration when the cornerstone was laid and also made the dedication speech 30 years later.

Although many visitors make the descent by stairway, we come down by elevator and walk down the east approach of the Mall to the stately Capitol. Its great dome, 307½ feet above ground, makes it appear nearer than it actually is, and as we climb the towering tiers of steps at the entrance we resolve to take a taxi back to our hotel when we leave. We're in full agreement that Washington is rightfully called the City of Magnificent Distances.

A guide tells us that the building's historic cornerstone was laid by George Washington in 1793, that the wings of the partly completed structure were burned by the British in 1814, and that it was 1865 before the heroic-sized Statue of Freedom was placed atop the dome, thus completing the construction. During the Civil War the Confederate forces swept to the vicinity of Alexandria several times, and there was great fear that the unfinished Capitol dome might become a target for Confederate cannon. The attempts made then to camouflage it were probably the first efforts of the kind.

We learn that the senate is in session and we get seats in the gallery right at the rail. Sur-

W. H. Thrall Jr.

107 *Extra* dollars for pictures

You still have time to enter Trains' Photo Contest and get your share of the $107 in prize money which is being offered in addition to the regular rates of payment for picture stories. Sit down tonight and plan a series of pictures on any railroad subject. Get your story down in outline form, then go out and shoot.

Maybe you already have a series of pictures that tell a story. If at least some of the photos were taken since January 1, 1946, the series is eligible under the rules of the contest. You may choose any railroad subject. Submit five or more photos, together with plenty of information. Don't worry about punctuation or grammar; this is a photo contest, not a writing contest. But be sure that all information is accurate and that all names, if any, are spelled correctly.

Follow these simple rules:

1. Entries will be judged on the basis of:
   a. Subject matter and interest.
   b. Completeness of the series.
   c. Information supplied.
   d. Photographic quality for reproduction purposes.
2. Prizes in addition to regular rates at time of use will be:
   First Prize, $50. Second Prize, $20. Third Prize, $15. Fourth Prize, $12. Fifth Prize, $10. There will be no tie prizes awarded.
3. Make sure that at least some of the pictures in your series were taken since January 1, 1946.
4. Alternate photos of the same subject, or photos that illustrate extra information may be included and will add to the value of a series even though some may not be of as good quality.
5. All entries become our property but payment will be made according to our regular rates when published in addition to and regardless of any prize money earned. Prize money will be paid to winners when contest is announced. Publication payments will be made later as the pictures are used.
6. No entries will be returned to the entrant. The entrant may not submit any of the contest entry photos for reproduction by another user without the consent of Kalmbach Publishing Co.
7. Negatives may be kept by the entrant but we may ask to borrow them for some special reason. Entrants retain the right to sell or give extra prints to other railfans from their negatives as long as such prints are marked "not for reproduction."
8. All prints submitted must be glossy finish, not smaller than two inches square and not larger than 8½" x 14".
9. If mounted, place prints on one side of the mount only, so that an entire entry can be spread out on a table. Loose-leaf albums are acceptable.
10. Include one or more pages of information about the story the pictures tell. This can be a brief but complete outline of whatever is illustrated, or it can even be as long as the Barham article in the May '46 TRAINS. This general information should be in addition to the information accompanying each photo (rule 11).
11. Include specific information with each of the pictures to make the part of the story it tells clear. Add the approximate date when the pictures were taken, locations, etc.
12. If an entry includes the work of another photographer besides yourself, be sure you have a right to submit the other man's work. At least part of the entry should be pictures taken by you. Several photographers in the same or in different localities may collaborate on a single entry if desired. Photographs taken by Kalmbach Publishing Co. employees are not eligible for prizes.
13. Mark PHOTO CONTEST and your name and address on each photo and data sheet of your entry. Add the photographer's name and address on any pictures you did not take yourself.
14. Send your entry so that it will be postmarked before midnight October 31, 1946, to Photo Contest, care of TRAINS, 1027 N. 7th St., Milwaukee 3, Wis.

prisingly, the chamber is very quiet. There is none of the fiery debate and bombastic oratory that some newspaper accounts have led us to expect. A clerk is reading a bill in a sing-song drone and a few senators seem to be following along with him from their own copies, but most of the seats are empty. Back near one exit several senators are talking together, while others come in and go out very casually. Apparently the bill being considered is not particularly important, or else the decision has already been made in committee, which may account for the fact that the gallery is almost empty.

We study the faces of the men down there on the floor of the chamber. By and large, they are strong faces, radiating capability, confidence and sincerity. Looking at them we realize that, too often, our censure and ridicule is scattered over Congress as a whole, when actually it should be concentrated upon a few individuals who don't measure up. We tiptoe out of the chamber with a tightness in our throats. These men stand for democracy at work — not always working just as we want it, true, but still doing the best job the world has ever known.

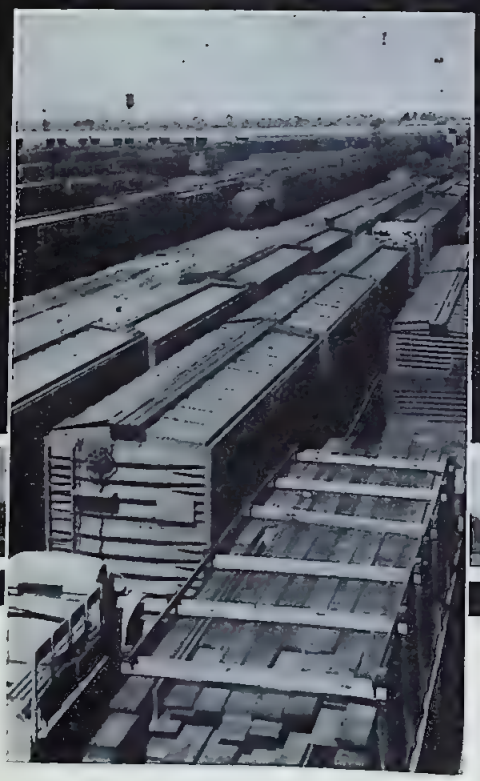
The magnificent distances are beginning to tell on us, and this afternoon we're going to take a taxi when we go to the Lincoln Memorial, that glorious Doric Greek temple with a peristyle of 36 columns — one for each state when the Great Emancipator was president — and where the calm and quiet waters of the reflecting pool seem to mirror the man who was always calm and careful and unruffled when the life of this nation hung in the balance.

Then, of course, we must see the Pentagon Building, just to say that we've seen it, and after that make a quick trip through the Smithsonian Institution, which really merits a month's visit. Later on, we'll take a half-hour's ride through Rock Creek Park, where nature has been left undisturbed and where the noise and turmoil of near-by Washington seem a thousand miles away. Before we go to bed, we're going to walk past the White House again, look in at the lighted windows and ponder the splendid glory of a nation that gives every boy, rich or poor, a fair chance to live there some day.

Washington — the Greatest Free Show on Earth. And it's all yours and mine. Started by us, maintained by us and, God willing, to be perpetuated by us. It stands for the grandest conception of government of all time, and never let any carping critic tell us otherwise.

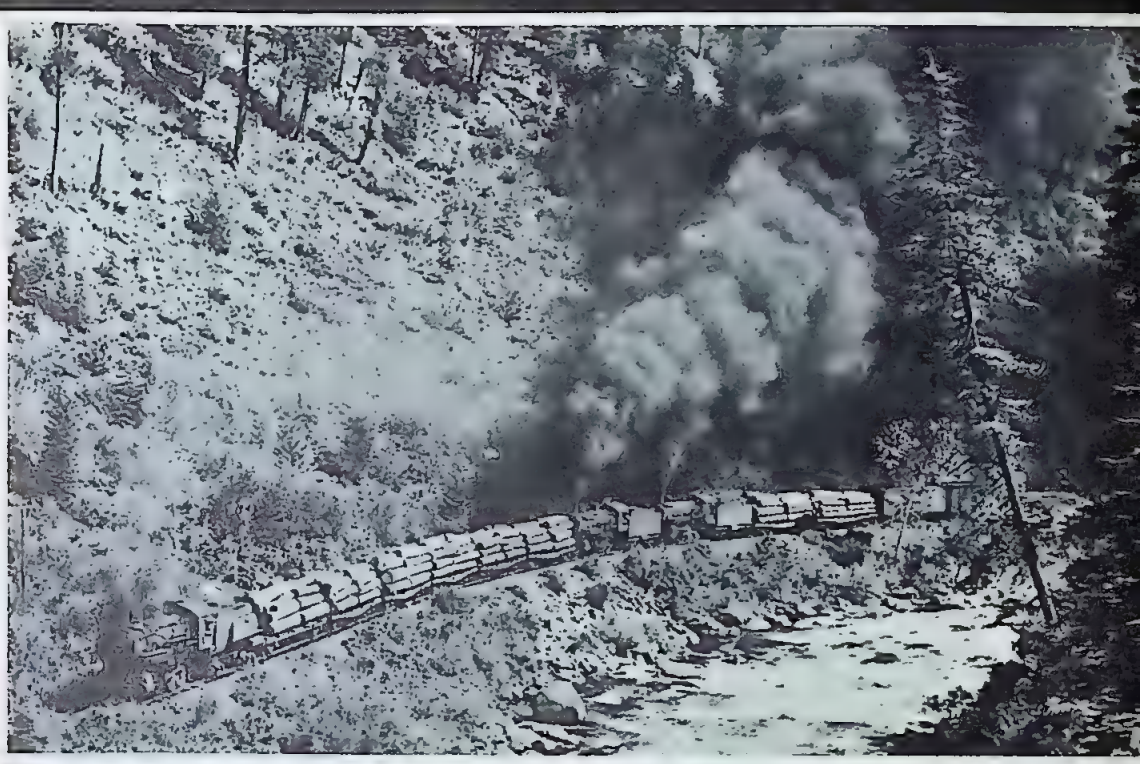
The railroad, America's greatest industrial asset, speeds on from war to peace. It must help revitalize the nation

Eric Herman catches the spirit of '46 in his photo of AT&SF No. 3738 ringing the bell near San Juan Capistrano, Calif. Despite the short-lived strike of railroad crewmen, the railroads lead the way on the route to reconversion. "Proceed" photo courtesy Norfolk & Western.

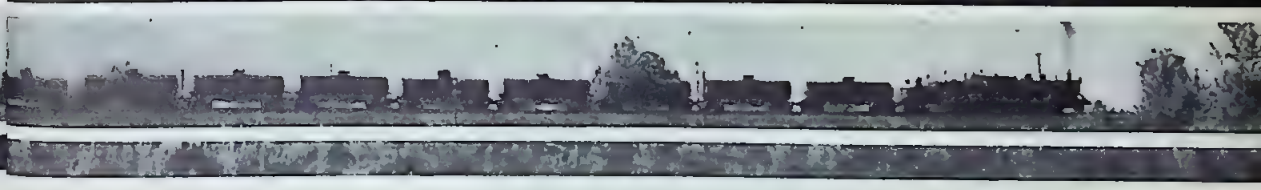


The task is great

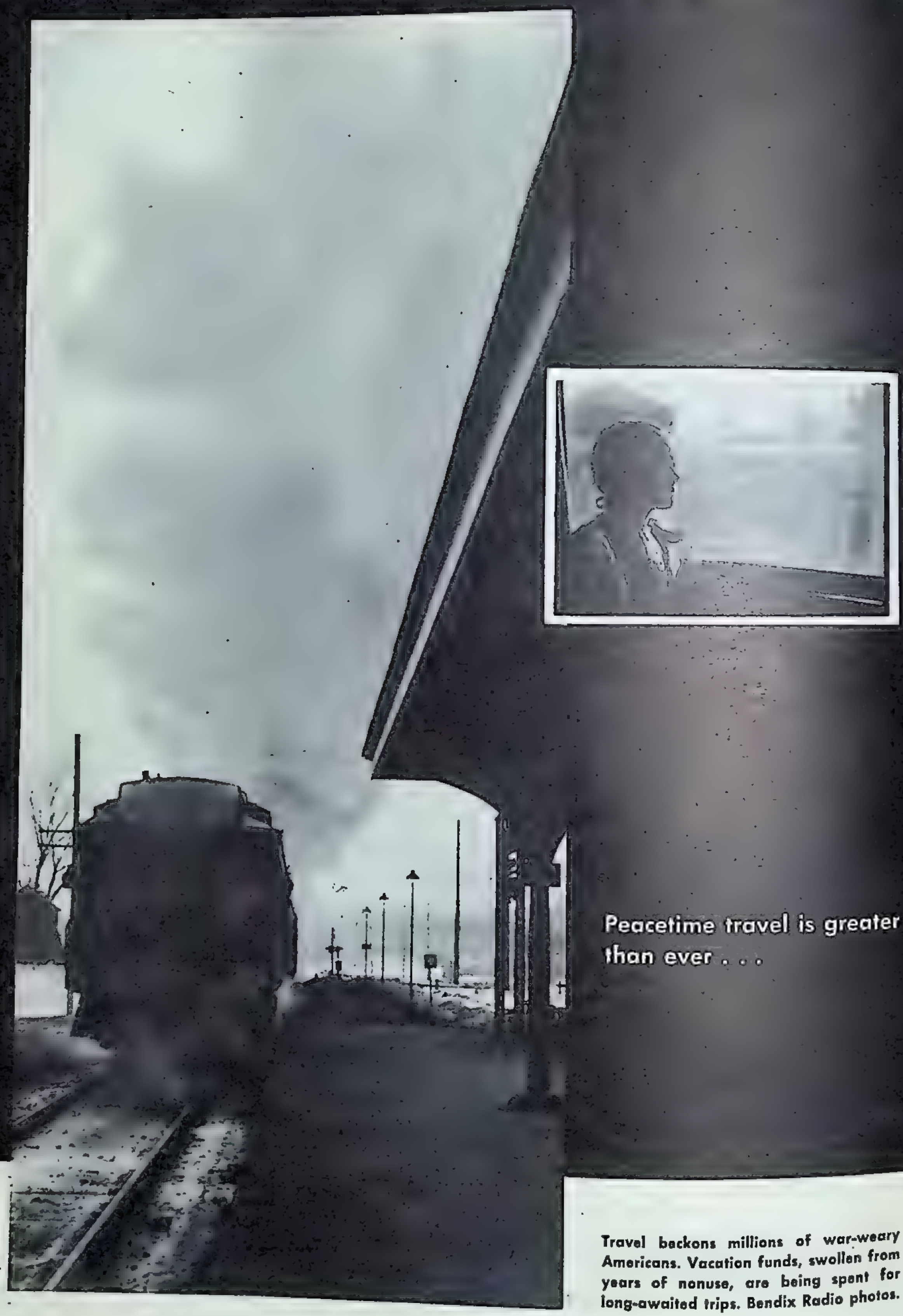
Carloadings show only a slight decrease from wartime. Above, the Illinois Central freight yards in Chicago. Photo from A. A.-R. At left, Proviso Yard of the Chicago & North Western; freight house in distance. Allison-Lighthall photo.



Timber and fuel are needed everywhere



Independence Day, 1946, found Union Pacific's mixed train No. 385 trundling eight cars of logs, 12 freight and coal cars, a passenger car and a baggage car over the heavy grades along the Payette River north of Banks, Ida., on the Idaho Northern branch of the UP. Photo by H. R. Griffiths. Fuel oil for industry follows a Northern Pacific terminal engine on Willbridge grade, Portland, Ore. Photo by W. F. Postles.



Peacetime travel is greater than ever . . .

Travel beckons millions of war-weary Americans. Vacation funds, swollen from years of nonuse, are being spent for long-awaited trips. Bendix Radio photos.

And freight is rolling at new peacetime peaks

A huge coal-burning articulated locomotive barrels over a stretch of Southern Pacific track near El Paso, Tex., carrying not only freight but (on top of second and fourth cars) "passengers" as well. Photo from SP.

Through Oscawanna, N. Y., hustles this eastbound New York Central freight train behind No. 3148, a Mohawk or Mountain type (4-8-2). Photo by Theo. A. Gay.

New power is ready for any duty

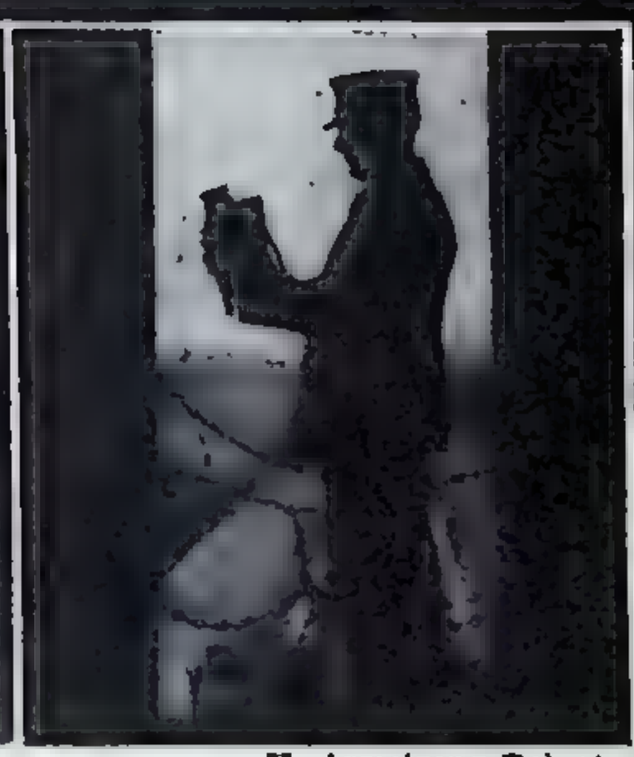
Above, a war-born Western Maryland 4-6-6-4 carries the products of peace between Hagerstown and Baltimore. Photo by A. Aubrey Bodine. At left, postwar equipment goes into service on the Rock Island's Golden State Limited. Kaufmann & Fabry photo from CRI&P.

Harold M. Lambert.

And with competent hands . . .

Eugene Baxter.

Alex L. Darragh.



H. Armstrong Roberts.

The work of the railroads will be done well

Sunrise on the Union Pacific. First section of the westbound Pacific Limited gets under way. H. R. Griffiths.

H. A. DeGolyer Jr., Rail Photo Service, 47 Royal St., Allston, Mass.

Texas & Pacific 4-8-2

The No. 908 is one of Texas & Pacific's five Class M-2 Mountain type locomotives built by Baldwin in 1928 for heavy mainline passenger service operating over the Eastern District between Fort Worth and Texarkana, Tex., and over the Western District between Fort Worth and El Paso, Tex. These five, Nos. 905 to 909, are sisters of Class M-1, built by American Locomotive Company in 1925 for service over the same territory. They are capable of hauling 17 all-steel passenger cars over ruling grades of 1.4 per cent on the Western District at timetable speeds, and 20 to 25 cars over the Eastern District, where the ruling grade is only 1 per cent. They average from 10,000 to 12,000 miles per month, and their availability has been well over 90 per cent. Currently the T&P has a program for increasing the steam pressure of these 10 locomotives (there are also five in Class M-1) from 210 to 225 pounds.

Principal Dimensions:

	Class M-1 900-904	Class M-2 905-909
Tractive effort, lbs.	53,500	54.700
Booster	10,200	10,450
Cylinder, diameter and stroke, in.	27 x 30	27 x 30
Driver, diameter, in.	73	73
Loaded weight on drivers, lbs.	245,500	245,600
Loaded weight on pilot truck, lbs.	60,500	60,800
Loaded weight on trailing truck, lbs.	54,500	55,000
Loaded weight of engine, lbs.	360,500	361,400
Loaded weight of tender, lbs.	280,100	291,666
Steam pressure, lbs.	210	215
Grate area, sq. ft.	80.3	81.12
Evaporative heating surface, sq. ft.	3769	3774
Tender capacity:		
Gals. water	14,000	14,000
Gals. oil	6000	6000

The Short Lines' Pilot

Little roads which are a railfan's paradise have an organization to look after their special problems

BY RAYMOND MOODY

With the Yosemite Valley Railway Company on the abandonment skids and some other small lines apparently headed for the scrap pile, it is time to take a look at an organization which carries the welfare of these roads on the head end: the American Short Line Railroad Association. While not in business for the retention of unprofitable lines, despite their nostalgic appeal to railfans, the A. S. L. R. A. goes far to keep these lesser roads in the modern picture.

Somewhat over half of all the short lines in the United States are members of this voluntary nonprofit group. The list of names from A to Y teases the eye like a long peek at a railfan's paradise. Looking back over the rocking cars we cannot help noticing certain choice names which stand out like collectors' items: Aberdeen & Rockfish; Buffalo Creek & Gauley; Condon, Kinzua & Southern; DeQueen & Eastern; Escanaba & Lake Superior; Fonda, Johnstown & Gloversville; Ligonier Valley; Montana, Wyoming & Southern; Maryland & Pennsylvania; Quanah, Acme & Pacific; Trans-Florida Central; Virginia & Truckee; Wichita Falls & Southern, and way down on the rear end, Yreka Western. Where, you say, are Piedmont & Northern; New York, Susquehanna & Western; Sacramento Northern, and other favorites? Nonmembers. We may make a meet with them later on but they will be "in the hole."

Yes, they could belong. To quote Article II, Section 1, of the constitution of the A. S. L. R. A.:

Maryland & Pennsylvania is one of the grass roots railroads most loved by railroad connoisseurs. Its Baltimore Mail (below) runs close to nature through the unfenced scenery between York and Baltimore. Sidings are short so this is one road where passenger trains go on the siding for freights. On opposite page, motor train is in siding for freight.

Wm. Moedinger Jr., 4949 Walnut St., Philadelphia 39, Pa.

"Any short line railroad located in continental or territorial United States, and any Class 1 railroad having some or all of the problems of the short lines, shall be eligible to membership." And quoting further:

"The objects and purposes of the association are: (Article I, Section 3), (a) Co-operative action in the consideration and solution of problems of management and policy affecting the operation and welfare of short line railroads. (b) To promote harmonious and friendly co-operation between all classes of railroads. (c) To act as statutory agent in Washington for its members."

Of the 500 short lines in the United States, 319 were members as of February 1, 1945. Of these members 11 were Class 1 railroads, the Rio Grande being the longest with a mileage of 2404 and the Montour shortest with only 50.

Only 118 member roads haul passengers, several resorting entirely to buses for this business while many others use buses for some of their runs. A few roads also use trucks to haul at least part of their freight. Pennsylvania with 29 member roads has more than any other state. Closely following are North Carolina and New York with 21 and 20 respectively. New Mexico, North Dakota, and Wyoming have only one apiece, while Connecticut and Delaware disgrace the fraternity with none at all, the only states in the whole union to do so.

Thirty-four of these lines are juice roads, about half of them wholly freight haulers. Some of the more prominent exceptions are: the Bamberger Line in Utah, Chicago's North Shore and South Shore lines, the Jamestown, Westfield & Northwestern in New York State, Lackawanna & Wyoming Valley (Laurel Line) in Pennsylvania, the Potomac Edison Company (formerly Hagerstown & Frederick) in Maryland, Cedar Rapids & Iowa City in Iowa, and the Pittsburg County Railway Company, a 17-mile Oklahoma member.

On being queried by the writer, J. M. Hood, president of the A. S. L. R. A., affirmed that there was no accepted definition of a short line railroad. Then, touching on their recent wartime record he went on to state: "Short line gross and net income has kept pace with the trend in the industry. There are some outstanding exceptions. . . . A few of our lines enjoyed a very much increased passenger business due to recent restrictions on the use and availability of private automobiles. With the ex-

Wm. Moedinger Jr.

ception of a very few, our lines do not warrant a second main track or the use of C. T. C. They have, generally speaking, improved their physical layout to the extent material and labor have been available."

Most short line steam motive power is second-hand, with some prominent exceptions, of course. There are about 250 Diesels in use among member roads, both road and switching types. One of the services recently performed by the association was a questionnaire on the performance of these oil-burning electrics. The results of this mainly bore out the fact that Diesels do reduce fuel costs, that two units will generally replace three steam locomotives, and that operating costs are usually much lower. This data was revealed in the report of the association's mechanical committee for 1944.

Other important committees which gather and dispense interesting and helpful information for members each year are: car service, freight claim, operating, and traffic.

Heading the president's report for 1944 is the following paragraph: "During the past 12 months rail carriers as a whole have produced more freight ton miles and more passenger miles than ever before. Members of this association have to a large extent participated in this exemplary performance and have collectively and separately been complimented by military officers and civilians."

Besides annual reports of the various regional traffic managers maintained by the association in Eastern, Southern, Western, Southwestern and Pacific districts, which cover items ranging from O. D. T. orders to pickup and delivery service, switching and I. C. C. orders of various sorts, there are disquisitions of the general counsel on legal cases, a comprehensive review of labor relations and an outline of the all-important legislative program. This latter includes a statement of what the association favors and opposes in the way of railroad laws, and goes into considerable detail as to what bills have, have not, might or might not become laws.

A powerful argument for membership in this group is the importance of having an active organization in Washington, headquarters of the association, to watch out for the short line interests. Of the 200-odd lines which are not members a vast majority are terminal and switching roads. Also many of the roads of increasing size, whether or not they reach into the Class 1 definition,* may not be plagued with short line problems. Rather, their troubles have become extended into trunk line headaches.

Among nonmember roads the Des Moines Western Railway seems to hold a unique position. This pike, serving as a terminal road for the Fort Dodge, Des Moines & Southern and connecting also with nine other railroads, sports only 1.47 miles of main track to 3.73 miles of

* A Class 1 railroad is one with revenues of more than $1 million per annum.

Theo. A. Gay, 156 Van Buren Ave., Teaneck, N. J.

siding. This is characteristic of terminal and switching roads which often have more sidings than main line. Another typical short road, the Rock Island Southern, also a nonmember, extending 68.5 miles from Rock Island to Galesburg, Ill., advertises in the *Official Guide* (railfans take notice) two daily freight trains over different parts of its line with passenger space in the crummy. Some others have the same service, sometimes not shown in timetables.

Some short lines, like the Bath & Hammondsport, were formerly branches of large systems. They were abandoned or sold as unprofitable and later put on their feet by aggressive local management. Local pride can do a great deal for a railroad. Local necessity can also do a lot, for in many cases these little roads are the sole means of heavy transportation into towns or areas and without them coal becomes more expensive, distributing houses must move to other points on rails, and small industries die.

The short line railroad is usually also short on the traffic density which makes a railroad pay. It cannot be operated on big-time principles. Perhaps that is where it gets its charm, for every short line railroad is a separate entity which meets its local problems in its own way. The American Short Line Railroad Association relieves it of also meeting common national problems, and thus contributes immensely to perpetuating that American institution, the grass roots railroad.

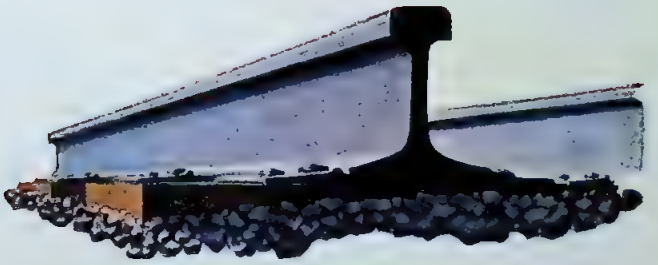
Alex. L. H. Darragh.

Chicago, South Shore & South Bend is a big-time road in equipment, right of way and density of traffic, but similarity of many of its problems to typical short line problems makes it eligible to membership in the short line association. Typical South Shore passenger train is shown above. Below is Piedmont & Northern passenger train at Greenwood, S. C., terminal. P&N is not a short line member. Except for one steam train on a branch (page 30) Fonda, Johnstown & Gloversville uses buses.

Alex. L. H. Darragh, 5836 N. Wayne Ave., Chicago 40, Ill.

STEEL...

an industry born of a rail!



Before 1864 all trains ran on rails of iron. America didn't even make steel rail. But the Pennsylvania Railroad, ever looking for better things, ordered 400 tons of steel from England (at $150 a ton) and had it laboriously hammered into rail. Steel proved twice as strong and wore four times as long. Then and there—the American steel industry was born.

Twenty years later the steel rail was still the steel business. But by 1929, when three times as much steel rail went through the rolls as in 1880, steel rail was only 5 per cent of the steel business. Skyscrapers, trains, automobiles, safes, pipe, mousetraps, beds, watches, stoves, refrigerators, handcuffs, wire, nails, fence posts, filing cabinets, office desks, ships, pen points, safety pins—so many things, *steel!*

Better yet, when America went to war it had the overwhelming advantage of a steel output *greater than all other countries combined.* That assured victory, saved American lives.

In peace and war, from that first steel rail to the present day, the Pennsylvania Railroad and steel have worked closely together. Most steel plants are on lines of the Pennsylvania. A large part of its operation is hauling raw materials for the making of steel and carrying the finished product away—all done for *less than a cent a ton per mile.* Moreover, it serves steel with steel—every car, every locomotive, every rail, every large terminal, every signal . . . *steel!*

Today, as steel prepares to turn out a torrent of new products from new alloys, the Pennsylvania Railroad wishes it well—an old friend, with an even greater future.

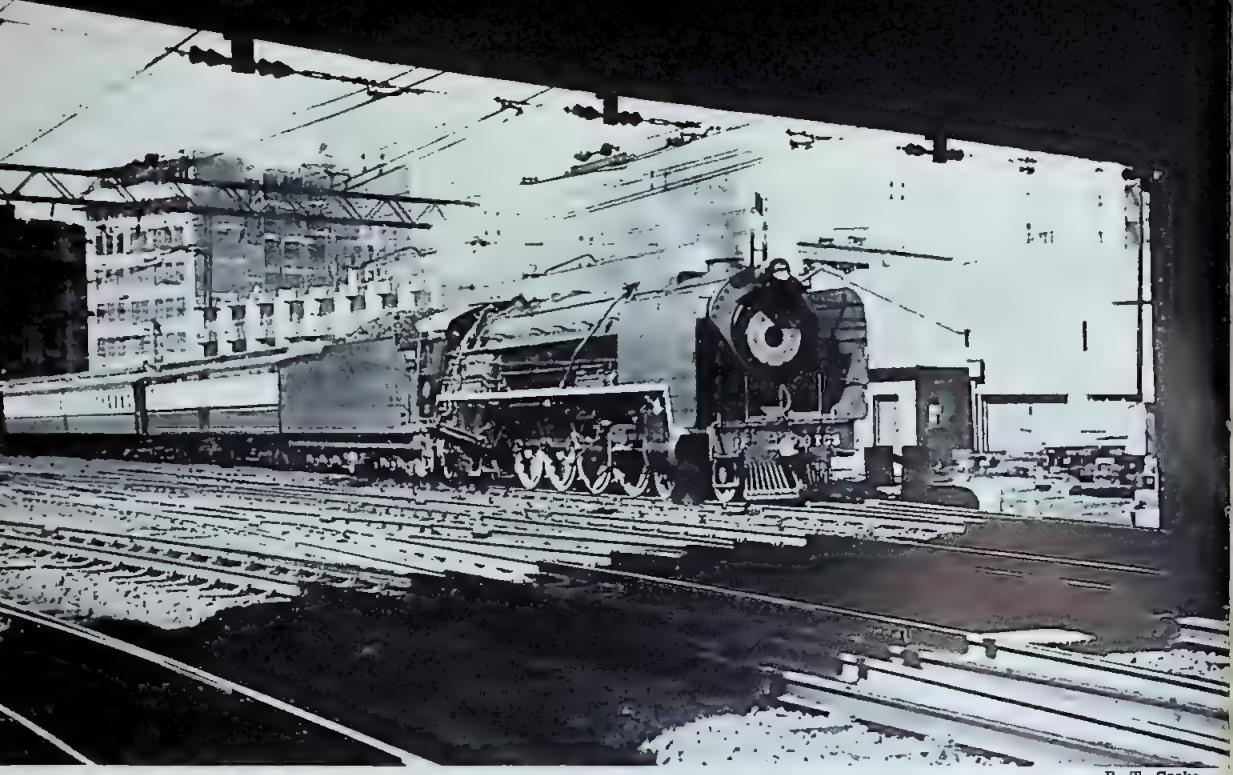
HOW PENNSYLVANIA RAILROAD RAIL HAS INCREASED IN SIZE AND STRENGTH OVER THE YEARS

Today the Pennsylvania Railroad uses the heaviest rail in the country and has made many improvements in its construction. Altogether there are more than 5,000,000 tons of steel rail in the Pennsylvania roadbed. If every rail had to be replaced, it would take all the steel mills rolling rail a year and a half to produce the necessary quantity.

PENNSYLVANIA RAILROAD

1846 *1946*

ONE HUNDRED YEARS OF TRANSPORTATION PROGRESS



B. T. Cooke.

Suid Afrikaanse Sporwee

In the Union of South Africa, 3′-6″ gauge is "standard" and narrow gauge measures two feet

BY J. D. MAHONEY

The smart "Union-Castle" liner has just tied up at the Capetown docks, another long voyage from England completed. The ship's Diesel engines are strangely silent, but this is unnoticed by the passengers bustling ashore. The docks are a hive of activity, and long cranes are already dipping into the ship's holds for mail and cargo. Looming impressively above this morning arrival scene is massive Table Mountain, which gives the city an individuality just as the famous Manhattan skyline does to New York. The mountain is wearing its "tablecloth"—a mass of mist around the flat top.

On leaving the ship, we see a magnificent train at dockside, its highly polished blue and cream cars glistening in the sun and the vestibule doors invitingly open. On the car sides in gold leaf are the letters SAR and SAS—abbreviations of South African Railways and Suid Afrikaanse Sporwee, the Afrikaans translation. Afrikaans is the language of the Boers, descendants of the early Dutch settlers of Africa, who form a large part of the South African white population; and all timetables are printed in both languages.

The train is the famous *Union Express,* linking the chief South African cities of Capetown (population 344,220) and Johannesburg (population 519,380). It also carries cars for the Union capital, Pretoria, and the important east coast port of Durban. It is an all-first-class, extra-fare train, the pride of the South African Railways Administration, which lavishes much affection on it and spares nothing to make it a fitting symbol of a great and efficient railway.

The *Union Express* runs twice weekly, reaching Johannesburg, 956 miles distant, 27 hours

Left: The Union Limited leaves Johannesburg for Capetown behind engine No. 3303, a Mountain type of Class 23. Strangely American in appearance, the 136 locomotives of this class were all built by German firms, many of them just before the outbreak of World War II. Right: A Garratt-type 4-8-2 + 2-8-4 built by Beyer-Peacock (Great Britain) in 1938. These locomotives are used in passenger and freight service on the difficult Johannesburg-Mafeking section of the route to southern Rhodesia, on which heavy loads must be hauled over somewhat light track to connect with the Rhodesian Railways. This picture was taken at the Braamfontein locomotive sheds. The engine, No. 2295, is of Class GM and produces 60,700 pounds tractive effort at 75 per cent boiler pressure. Walschaert valve gear is used.

B. T. Cooke.

after departure. On the return trip, the train is known as the *Union Limited,* arriving at Capetown in 25 hours 45 minutes, giving an average speed of 37.1 miles per hour, fastest in South Africa. The lower northbound speed is due to the fact that Johannesburg is on the high interior plateau of the veld at an altitude of 5735 feet above sea level.

The distance between Capetown and Johannesburg approximates the 961 miles from New York to Chicago on the New York Central Railroad, and the 25¾-hour schedule of the *Union Limited* at first glance makes a very poor showing against the 16 hours of the *Twentieth Century Limited.* However, when the formidable route is considered and when it is realized that the gauge is only 3 feet 6 inches, the performance is seen in a new light.

The amazing accomplishments of the 3′-6″ gauge makes the SAR of outstanding interest. It has many locomotives of a power which would not be despised on any American railroad. The *Express* compares not only in modern luxury but also in size with the famous *Flying Scotsman* of England and the Riviera *Blue Train* of the Continent.

Let us inspect the train before it leaves the docks. At the head end is a huge Mountain locomotive in the same immaculate condition as the cars, and beautifully decorated with chromium-plated boiler bands, cylinder covers, dome cover and handrails. The big nickel-steel boiler crowds the clearance limits. The smoke stack is extremely squat, the steam dome almost nonexistent, and the safety valves are set in diagonally for clearance. On the smokebox door is a large circular plaque bearing the train's name in English and Afrikaans. This locomotive is one of the 136 Class 23 engines introduced in 1938 for heavy mainline passenger and freight service, the heaviest running not only in South Africa but also on any 3′-6″ gauge. It has an American appearance, is well proportioned, and is of such simple, clean design that streamlining would be superfluous. Large smoke deflectors on either side of the smokebox make the locomotive seem even more massive.

The 13 cars are made up as follows from the engine: baggage, four combined day and sleeping cars (two for Durban, two for Johannesburg and Pretoria), kitchen car, dining car, lounge car, four day and sleeping cars for Johannesburg, mail. They are the last word in modern comfort and luxury. Of all-steel construction, they have clean, unbroken exteriors, are fully air-conditioned, and run on Timken roller bearings in specially sprung trucks. Roofs are painted aluminum. Two gold bands run the full length of the blue and cream sides.

The combined day and sleeping cars are of the compartment type with side corridor, and have single-, double- and three-berth compartments. Type *A* cars accommodate 15 passengers; Type *B*, 11 passengers and two attendants. These two types are designed to run in pairs.

All fittings are chromium-plated; compartments are finished in veneered timbers including Sapeli and Honduras mahoganies and Zebano, all french-polished. Each compartment has a wash basin with hot and cold water and a full-length mirror in the sliding door. Lighting is by means of side and center roof fittings, independently controlled, and two berth lights. Outside each compartment is a green signal light working in conjunction with a bell to summon the attendant. Each car has telephonic communication with the diner so that the attendant can telephone passengers' catering requirements. A much appreciated convenience is a shower room equipped with the very latest facilities.

Outstanding in the lounge car is a semi-circular cocktail bar with large, full-depth mirrors at the back on which bottled goods are dis-

played. At each end of the saloon is a large built-in settee. Chromium is extensively used for decoration.

The dining car presents an imposing vista from within. An alcove seating arrangement is used, and two diners sit on one side and one on the other side of the car. Color motif is blue, even to the fine damask tablecloths and napkins. Large murals decorate the end walls.

The train is in charge of a train manager who supervises the large number of attendants (one to each car) and the restaurant and lounge car staff in addition to the train crew. Recently train hostesses were introduced.

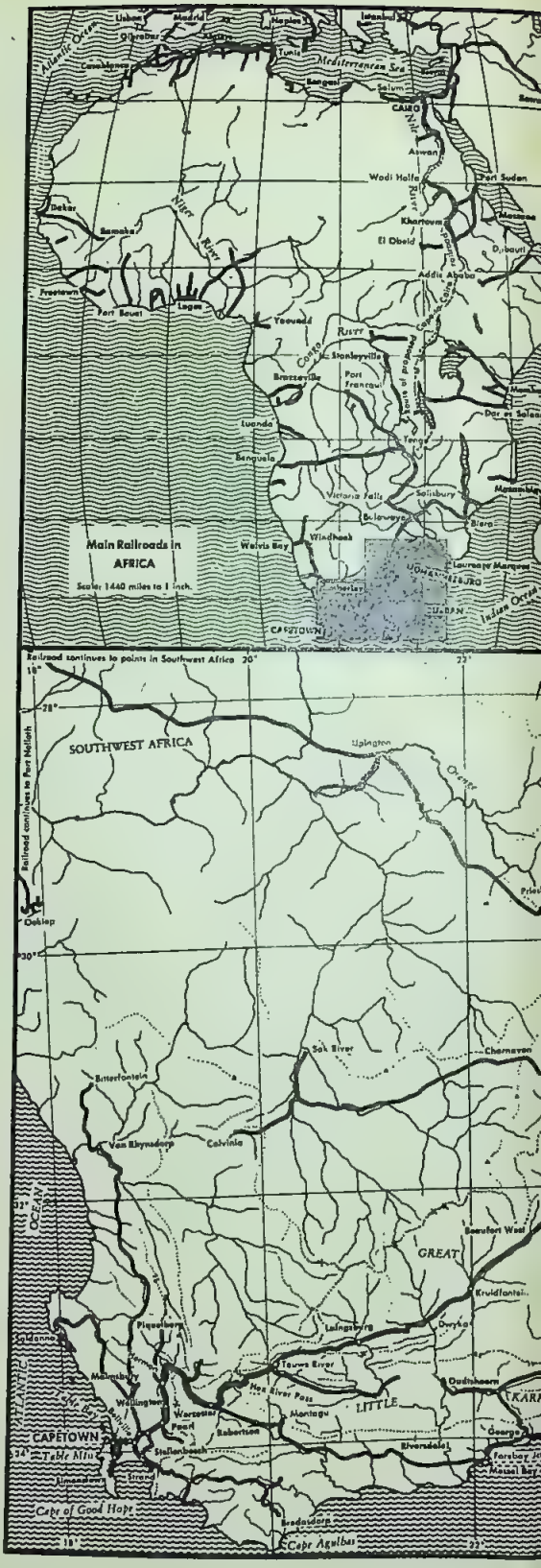
All in all, the passenger receives much extra attention for the extra fare of £2/2 (roughly $10), and finds the *Union Express* an enjoyable way of seeing something of South Africa. The dust and the intense heat of the sun on the karroo (plateau) have no terrors, and the journey is in striking contrast to the treks made by the Boer pioneers in their oxen-hauled wagons to the Transvaal.

We have inspected the train, and now the passengers and their luggage are aboard. The *Express* slowly moves away from dockside, coming to a stop at Monument Station, on the electrified suburban line to Sea Point. Monument Station is used on Mondays and Fridays by the northbound and southbound trains respectively to connect with the weekly English mail-boat service. Apart from this, all mainline trains use the main terminal at Adderley Street.

We leave Monument Station at 11 a. m., and soon the crowded Capetown yards are left behind and we pass busy Salt River Junction (two miles), where the important electric suburban line to Simonstown, at the south of the Cape Peninsula, leaves the main line. In the next three miles two more electric suburban lines branch off to the right, to Pinelands and Dieprivier. We are on a very busy stretch of line, and before the end of double track is reached at Paarl we pass four more junctions.

Suburban electrification is left behind at Bellville. The line soon begins to rise toward the mountains of Cape Province, and at Worcester, 109 miles from Capetown (air-line distance, 60 miles), the altitude is 795 feet. Worcester is the junction with the line which reaches to Port Elizabeth on the south coast via Mossel Bay, after crossing the Little Karroo part of an indirect alternate route to Johannesburg.

The country thus far has been very fertile



Railroads in SOUTH AFRICA
Scale: 102 miles to 1 inch.
Compiled and drawn by Lion H. Westcott
August, 1946.
SOUTHERN RHODESIA
Beitbridge
Limpopo
River
Railroad continues to Bulawayo, Victoria Falls, and points in Mozambique, Nyassaland, Rhodesia, Belgian Congo and Angola.
BECHUANALAND
KALAHARI
DESERT
Molopo
River
Zeekmakaar
Pietersburg
MOZAMBIQUE
Grout Marico
Rustenburg
Witwatersrand
JOHANNESBURG
PRETORIA
Mafeking
Lichtenburg
Krugersdorp
Randfontein
Germiston
Benoni
Boksburg
Springs
Middelburg
Lourenço Marques
Bethal
Ermelo
Heidelberg
Potchefstroom
River
Vryburg
Klerksdorp
Standerton
SWAZILAND
Frankfort
Vaal
Bloemhof
Kroonstad
Volksrust
Gallol
Mountains
Newcastle
Vryheid
Lobatlia
Fourteen Streams
Harrismith
Glencoe
Kimberley
Drakensberg
Diamond Jct
Ladysmith
Mt. Aux Sources (0761)
Pickburg
Bloemfontein
Douglas
Krantzkop
River
THE
VELD
BASUTOLAND
River
Pietermaritzburg
Cato Ridge
DURBAN
The Point
Orange
Matatiele
DeAar
Aliwal North
Port Shepstone
Maclear
Victoria West
Hutchinson
Middelburg
Umtata
Queenstown
Sneeuwberg 8208
Cradock
Graaff-Reinet
KARROO
Somerset East
King William's Town
East London
Grahamstown
Uitenhage
Port Elizabeth
INDIAN
OCEAN

and pleasant, a land of fruit farms and vineyards and lovely old homesteads. But soon pleasant scenes are left behind as the train climbs the Hex River Mountains in earnest, the exhaust of our locomotive and of the recently attached helper at the rear making a noisy symphony in the clear air. Grim, rugged mountains tower on all sides. The slim rails wind around ridges and traverse narrow kloofs (ravines), fullest advantage being taken of the curving possibilities of the narrow gauge. The worst part of the mountain section is on the sides of mighty Matroosberg, where the line rises 1577 feet in 16.1 miles, almost exclusively on 2½ per cent grade except for three ¼-mile strips of level provided for better control of descending trains. Curves sharpen, and there are many severe reverse curves. Time allowed for this 16.1 miles is 64 minutes.

The engines grunt their way over the summit of Hex Pass, southern gateway to the Great Karroo. At Touws River, 160 miles from Capetown, we reach an altitude of 2532 feet and the steepest climbing is over. We now have our first view of the arid karroo, the 2000-foot-high southern plateau which gives way to the higher plateau of the veld, ranging upwards from 4000 feet above sea level. We are not enthusiastic. The karroo stretches away into the distance, apparently boundless, giving an impression of stark loneliness. A stunted bush grows here and there, and scattered sheep can be seen, while an occasional farmhouse and tree plantation comes into view. The sun beats mercilessly on the scene, but the high altitude gives the air an invigorating crispness.

During the night the *Express* pauses at the important junction of De Aar, 501 miles from Capetown. The altitude here is 4079 feet. From De Aar a slim tentacle of a branch line reaches out over barren Southwest Africa to Walvis Bay, 1134 miles — some length for a mere branch line! This line has the longest bridge (2974 feet) on the SAR, over the Orange River at Upington. More than once its 102 steel spans have been totally submerged in great floods. It was built in 1915 during the Southwest African campaign of World War I.

De Aar is an important locomotive depot, and we change locomotives here. More than likely, the new engine will be a Pacific of Class 16-E, noteworthy for its 72-inch drivers, largest on any 3′-6″ gauge engine. One of these engines is named "Allan G. Watson" in honor of the eminent chief mechanical engineer who designed it just before his retirement from railroad work.

Early in the morning the *Express* draws into the world-famous city of Kimberley, a huge diamond set in the heart of the veld, 647 miles from Capetown. Four mines in a small area here have produced diamonds worth more than a billion and a quarter dollars. It was here that the famous empire builder Sir Cecil Rhodes laid the foundation of his huge fortune.

At Kimberley, the cars for Durban are uncoupled to continue later by way of Bloemfontein and over the Drakensburg mountains.

Forty-eight miles beyond Kimberley we come to another junction, the beautifully named Fourteen Streams. An important line branches off to the left here. Trains use this line for Rhodesia and other northern points, including the world-famous Victoria Falls, which can be seen from the train as it passes over a huge arch bridge amid the spray of the falls. The slender rails finish up as the Katanga Railway, and reach Port Francqui* in the Belgian Congo, 3292 miles from Capetown. Farther than from New York to Los Angeles!

From Fourteen Streams, Johannesburg is 261 miles northeast, and the arrival at 2:10 p.m. does not now seem so far off. The veld still rolls away to the far horizon and still presents the same lonely aspect, but as the train speeds on we notice that the open grasslands are interspersed with maize fields and pastures, and clumps of bushes here and there. Soon after having lunch, Randfontein, terminus of the Johannesburg suburban area, and other towns of the rapidly expanding West Rand (short for Witwatersrand, "white water ridge") flash by in rapid succession, and the horizon changes dramatically. Great white conical hills and the huge mine headgears of the great Rand gold mines monopolize our attention. They rise 30 miles on all sides from the center of Johannesburg and are the outstanding characteristic of this modern Ophir. The hills are cyanide dumps composed of the white crushed rock from which the gold has been ex- *(Continued on page 47)*

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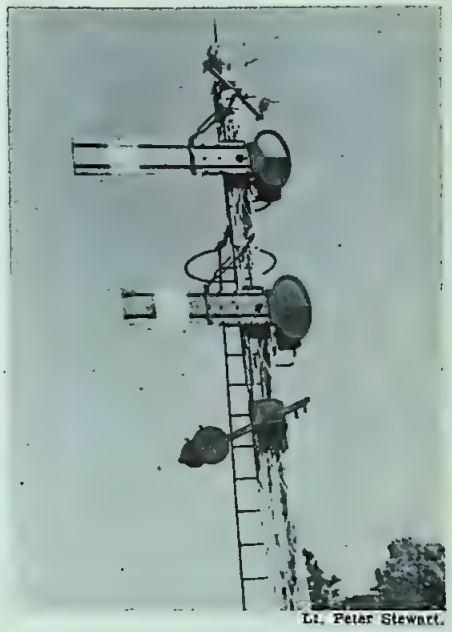
* Port Francqui is on a tributary of the Congo River, and freight is shipped to the coast from here by river, and then more rail, either the Matadi-Leopoldville Railway or the Congo-Ocean Railway [Jan. '44 TRAINS]. The line northward from Capetown through Rhodesia forms part of Sir Cecil Rhodes' cherished but unrealized dream of a Cape-to-Cairo railway through the heart of Africa. Another long continuous 3′-6″ gauge journey from Capetown is via the Rhodesia Railways, Katanga Railway and Benguela Railway to Lobito, a west African port in Portuguese Angola.

Pageant of South African Railroading

Illustrations from Lt. Peter Stewart, B. T. Cooke, Ewing Galloway and the South African Railways & Harbours.



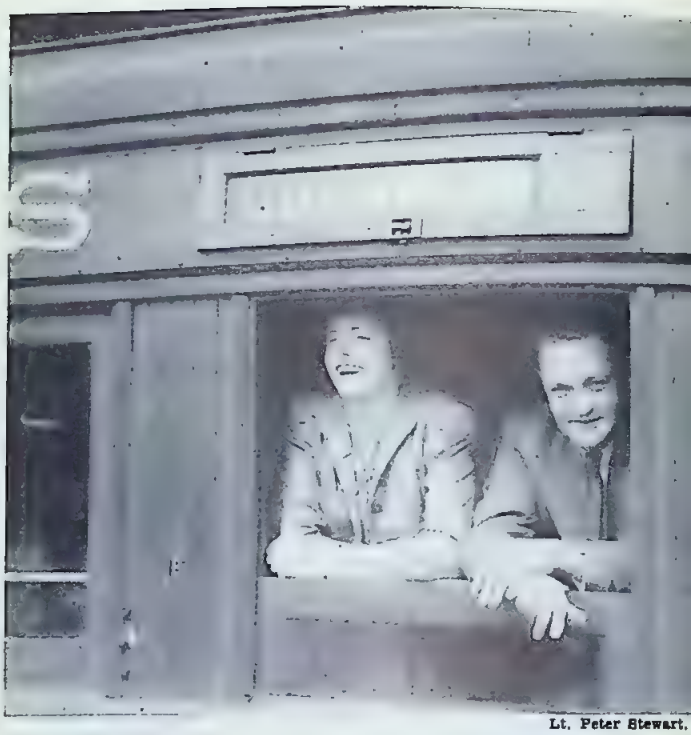
Lt. Peter Stewart.

Symbol of interminable distance and of endless stretches of veld is this typical signal mast, pictured in the Warrentown yard of the SAR.

Twenty-five miles from Zeerust, 149 miles west of Johannesburg, two 3'-6" gauge Beyer-Garratt articulated locomotives prepare to leave Groot Marico, water stop on the South African Railways.

Lt. Peter Stewart.

Passenger cars on the SAR are almost all of wood construction. Windows in this first-class car for Bulawayo conveniently slide downward. Before he retired on pension some years ago, Engineer Stuart was as proud as any schoolboy as he backed the Union Limited into Johannesburg Station. Below, left, natives peddle handmade toys to curious passengers as the train stops at a wayside station. Notice American type vestibules on cars. At right, below, the "driver" of the second engine looks over a cylinder as his loco drinks.



Lt. Peter Stewart.

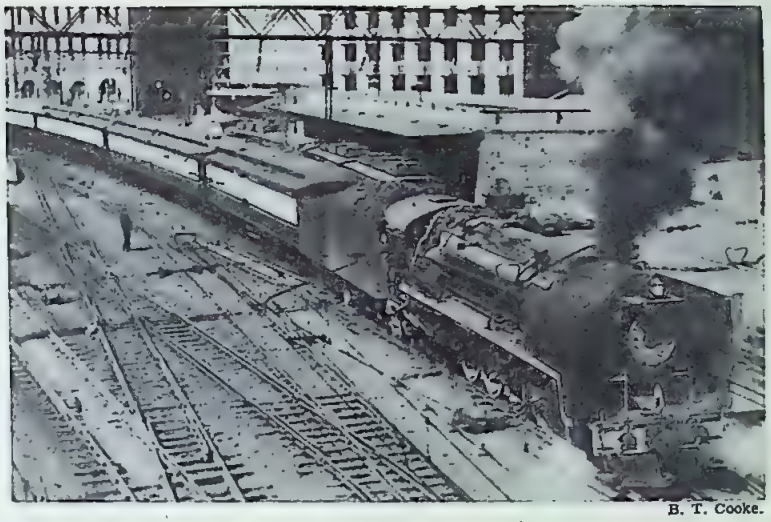
Lt. Peter Stewart.

B. T. Cooke.

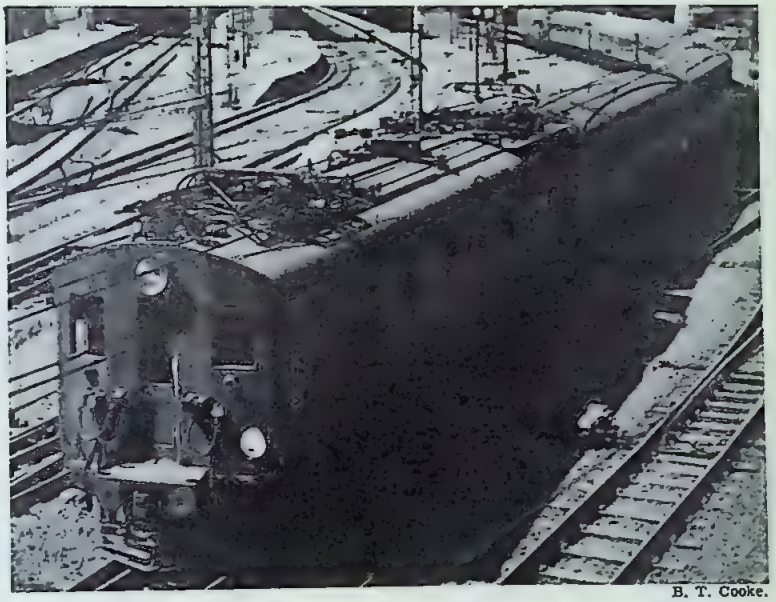
Lt. Peter Stewa

Above, a Class 15-F locomotive with a heavy load of coal bound from Witbank to Johannesburg. At right, top, the Union Limited leaves Johannesburg for the 25¾-hour run to Capetown. Center, a multiple unit suburban train at Johannesburg. Trains like this run through from Springs (East Rand) via Johannesburg to Randfontein (West Rand), about 52 miles, serving the gold-mining communities. The electrification also extends to Pretoria, capital of the Union of South Africa, 45 miles from Johannesburg. Bottom, Engine 3214 makes a standing brake test in the Braamfontein yards prior to backing into Johannesburg Station with the Union Limited for the run to Capetown. Notice the train name plate in both English and Afrikaans, the two official languages of the country. No. 3214 is a Class 23 Mountain type engine (4-8-2) built by Henschel & Sohn in 1938.

SAR&H.



B. T. Cooke.



B. T. Cooke.

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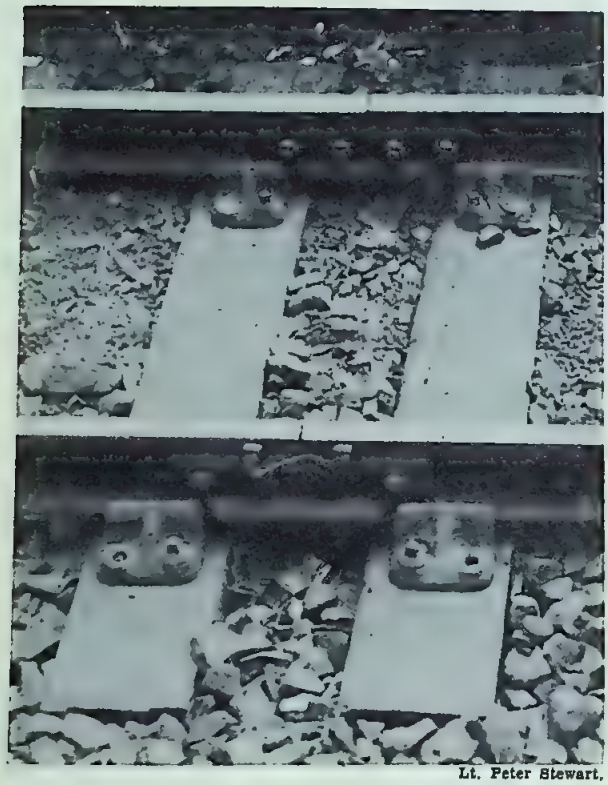


Lt. Peter Stewart.

The Union Limited passes Braamfontein Yard at the start of its run to Capetown. Multiple unit storage tracks are at the left in this photo; in the background at right can be seen storage tracks for electric locomotives. The narrow gauge of the tracks is quite apparent. Photo at left shows detail of SAR track construction in Johannesburg Station. Following English practice, rail joints are not staggered. Other differences from American practice are apparent in the chairs, fishplate bolts and tie bolts.

(Continued from page 38) tracted. The Rand yields more than $200 million worth of gold yearly, more than half of the world's output.

The fabulous wealth of these mines has made Johannesburg the largest and wealthiest city in South Africa. Its skyscrapers are in marked contrast to the hundreds of miles of lonely veld we have just traversed.

The *Express* comes to rest in the impressive new Johannesburg Station, built in 1932 at a cost of more than $3½ million. The main building, four stories high, is of a pleasing modern design with a classical influence. The finish is of brick veneer and stone. An interesting feature is a panel between the ground floor and second story showing a history of transport in bas-relief. A spacious concourse, 124 x 164 feet, gives access to the 16 long platforms, all but one of which are of the through type. Overhead gantries connect the various platforms with the main building. Electric lifts raise luggage, mail and express from platform level, and the 10 high lift towers give the station a most unusual appearance.

Railway construction in South Africa began in 1859 with a private line of 4'-8½" gauge from Capetown to Wellington. This was not completed until 1863, and meanwhile a two-mile line of the same gauge was opened between Durban and the Point. A few other short lines followed, but there was much opposition, on the grounds that the railways would put the bullock drivers — "a most meritorious class of men" — out of employment. However, after 1870 the discovery of diamonds and the development of the interior hastened construction. The 3'-6" gauge was adopted as standard in 1881, and all lines were altered accordingly. The cost of building 4'-8½" gauge through the rugged country to the interior would have been prohibitive at that time.

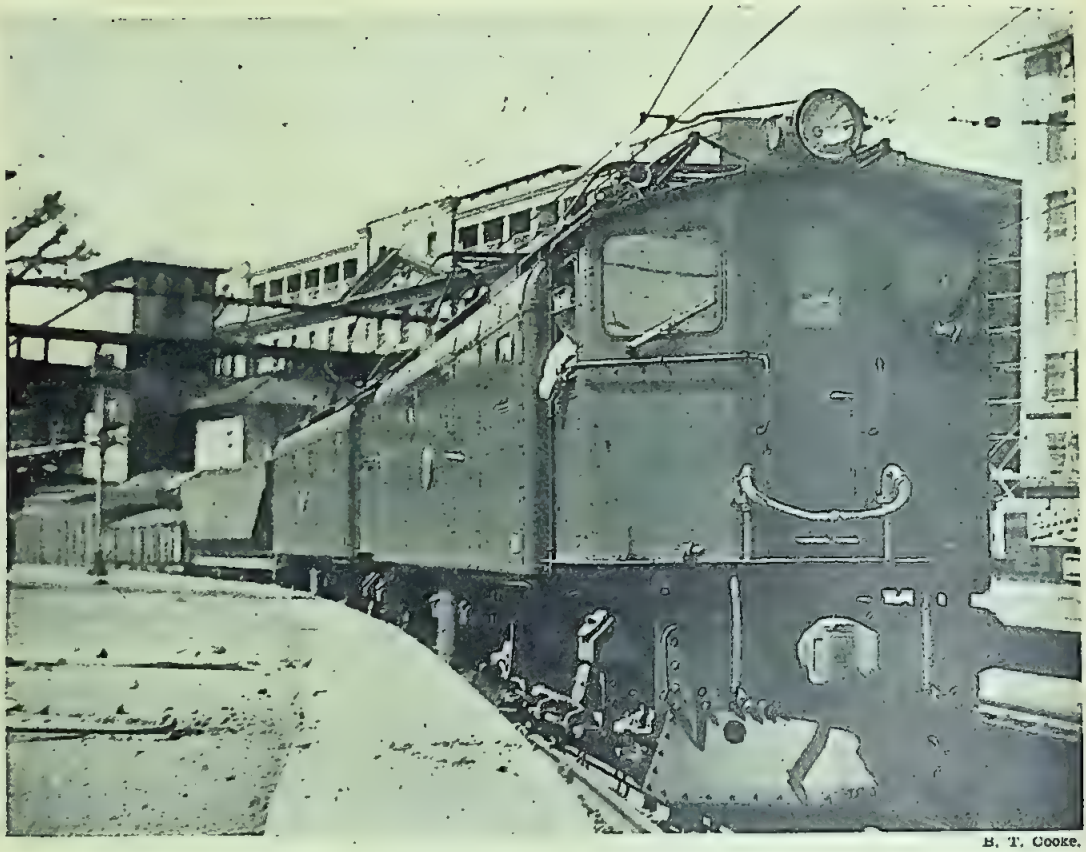
Up to 1910 the South African Railways consisted of three separate systems, the Cape Government Railways, the Natal Government Railways and the Central South African Railways, the latter serving Transvaal and the Orange Free State. Following the Act of Union in 1910 which created the Union of South Africa, these systems were amalgamated into the South African Railways. Mileage was then 7041. In 1920 the rails extended 9600 miles; in 1940, 13,238 miles with subsequent construction and the incorporation of the lines of ex-German Southwest Africa (1463 miles). The latter figure also includes the 205-mile line of the New Cape Central Railway Company between Worcester and Fore Bay Junction, purchased in 1925.

Generally speaking, the chief SAR lines converge on the interior from the main ports of Capetown, Port Elizabeth, East London, Durban, and Lorenço Marques in Mozambique (Portuguese). The chief construction problem was the ascent to the central plateau to heights of between 4000 and 6000 feet. The rise from the coast in practically every case is rapid, with sharp curves and heavy grades, as little land in the vicinity of the coast is less than 1000 feet above sea level. Before reaching the veld, which is practically flat, many miles of rugged mountainous country have to be negotiated. To keep first costs down, lines were built to follow the contours as much as possible, and heavy earthworks and tunnels were avoided. Today, with the country's greater wealth, the original alignments are being altered and improved. The Natal main line has been practically rebuilt, and the Cape Eastern main line is now being reconstructed to reduce curves and to lower gradients to a maximum of 2 per cent.

Washouts often cause trouble in the rainy season, especially in Southwest Africa, where the rivers change their courses for little reason and wash away large sections of track. In 1934 severe floods cut off this part of Africa for about three months.

Mainline track is constructed to a very high standard and is superbly maintained, a picture to see with its carefully trimmed rock ballast. Rails are laid on steel sole plates and fastened to the ties by means of coach screws except on very heavy traffic lines, where the rails are laid on heavy cast-iron chairs and secured by taper keys. Most mainline rails are 75- to 85-pound flat-bottom type, 40 feet long, but these are being replaced with 96-pound rails. The wood ties (2112 per mile) consist chiefly of d'Jatti from Java and Jarrah from western Australia. Extensive use is made of steel ties. Check rails are provided on all curves of 70-foot radius or less. At one time, before the installation of check rails, 80-pound rails lasted only three months on 300-foot curves in Natal. In recent years much of the track has been relaid with rails welded into 120-foot lengths.

Multiple tracks are not extensive in South Africa, although one nine-mile stretch between Johannesburg and Germiston boasts five tracks. The route is double track from Germiston to Pretoria and from Capetown to Paarl, and the Natal main line has been doubled from Durban to Cato Ridge. All electric suburban lines are



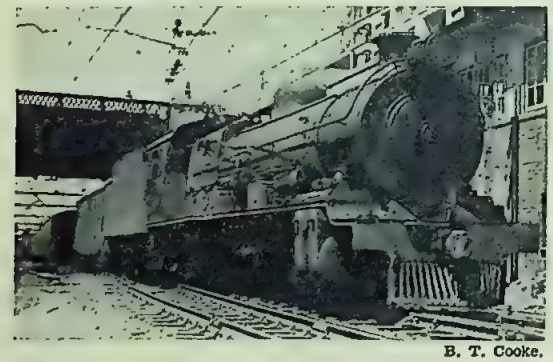
B. T. Cooke.

double-tracked. Total double-track mileage is about 200.

Standard signals are upper-quadrant two-position semaphores, some automatic, some manual, mounted on distinctive lattice steel masts. Home, starting, advance starting and distant signals are used. On single track the electric train staff or token system, requiring the engineer to have the token in his possession, is used, modified by a series of permissive notes.

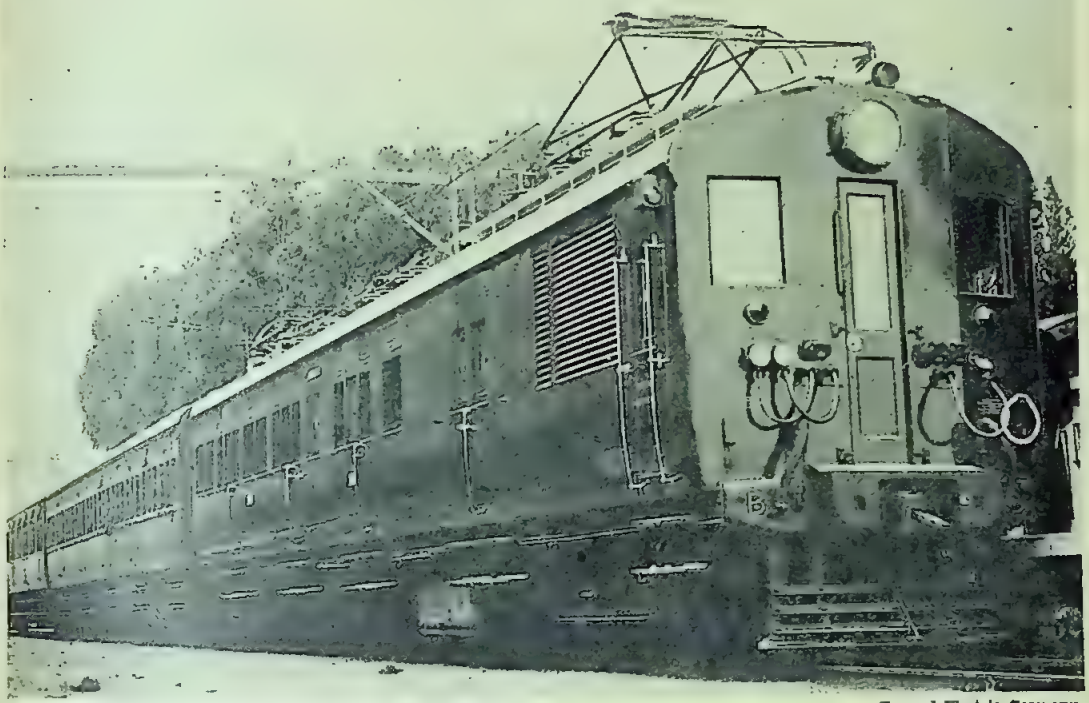
Large sums are being spent in installing automatic three-aspect color light signals in various localities. The first big installation was at Capetown in the station and yard, and on the electric suburban lines, where a 2½-minute headway was reduced to 90 seconds. The 58-mile electrified Randfontein-Johannesburg-Springs section, which is both suburban and main line, is now completely equipped with color light signaling.

The SAR in 1940 had the distinction of possessing the greatest electrified mileage in the British Empire, with 617 route miles and 1283 track miles of electrified line, a greater electri-



B. T. Cooke.

Above, a two-unit electric locomotive passes through Johannesburg with a shipment of freight from Pretoria to Braamfontein. These locomotives, semi-permanently coupled in pairs, are used on freight, mixed, and some passenger trains between Johannesburg and Pretoria, as well as on the 300-mile electrified section from Durban to Volksrust on the Durban-Johannesburg line. Built by Werkspoor, Amsterdam, in 1939, these units are of Class 1-E and have four 300-horsepower motors in each unit. At left, a Class 12-A Mountain type engine en route to Randfontein ("fontein" is the Afrikaans for "spring") passes through Johannesburg with a trainload of coal consigned to the gold mines. On opposite page is one of the latest multiple unit trains as it appeared at inauguration ceremonies March 19, 1937.



General Electric Company.

fied mileage than on any railroad in the United States. It is intended to electrify the entire Durban-Johannesburg main line, 494 miles, and when this is done the South African Railways will have a continuous electrified line exceeding the Milwaukee Road's record 441 miles between Harlowton and Avery.

Work was started on this electrification in 1923. Electric operation commenced on the 171-mile Glencoe-Pietermaritzburg section in 1925, and the Pietermaritzburg-Durban section was electrified in 1936. Electric trains were operating over the 78-mile Glencoe-Volksrust section a year later. Realignment of the right of way and double-tracking between Durban and Cato Ridge were accomplished simultaneously with the electrification.

So for 321 miles of its run, the *Johannesburg-Durban Express* runs behind electric locomotives over reconstructed railroad. While South African railway fans doubtless miss the spectacle and symphony of steam engines battling their way up the Natal grades under heavy plumes of smoke, passengers generally appreciate the improvements electrification has brought. The *Express* now covers the 494 miles in 17 hours 20 minutes at an average running speed (less station stops) of 31 miles an hour.

Other mainline electrifications are on the Diamana Junction-Harrismith section on the line from Durban to the Orange Free State, and between Johannesburg and Pretoria.

Electric suburban trains are operated from Capetown and Johannesburg, 50 and 95 route miles respectively. Multiple unit coaches and trailers are used in these services.

Before the war, 2204 3′-6″ and 72 two-foot gauge steam locomotives and 178 electric locomotives were in service on the SAR. Because of the merging of three separate systems to form the SAR, more than 100 different classes of locomotives were in service in 1910. Since then the number has been steadily reduced to a minimum. Efficiency is also furthered by standardization of locomotive parts so that they may be interchanged among several classes.

While only a relatively few engines have been built in the SAR shops (most were imported from Great Britain, U. S. A., Canada, Germany

Lt. Peter Stewart.

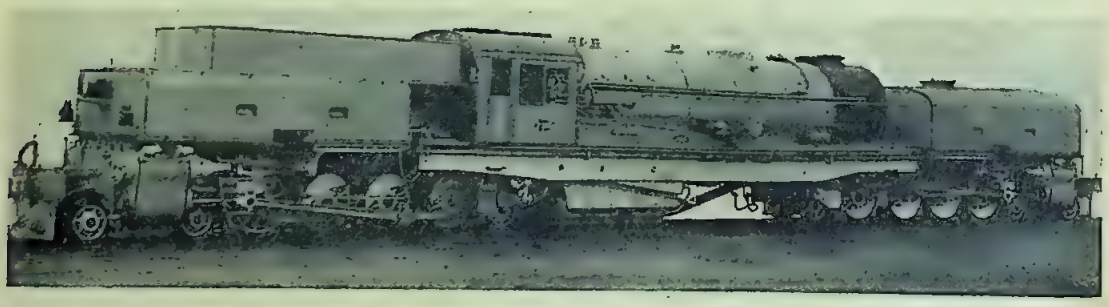
and Czechoslovakia), many of the older locomotives have been rebuilt to modern standards in the shops. Chief locomotive works are at Pretoria; chief car works are at Capetown.

The modern types of heavy mainline locomotives have been marked by the almost complete disappearance of stacks and domes as bigger boilers and wheels encroach on the clearance limits. Many of the modern types use rotary cam poppet valve gear.

Locomotives are invariably kept in immaculate condition. Crews take pride in them, and the smokebox doors are frequently decorated with metal silhouettes of diving girls, birds, or animals. Modern locomotives are beautifully adorned with stainless steel and the wheel rims are often painted white.

Most popular of all SAR locomotives is the Mountain type, of which there are many classes, heavy for mainline duty and lighter for other service. They are found everywhere on the system. South Africa pioneered this type on the old Natal Government Railways in 1909.

Engines of high power have always found favor on the SAR with its many steeply graded sections and its heavy trains. Thus Beyer-Garratt articulateds are used in greater numbers on the SAR than on any other railroad. They are much preferred to the Mallet type because they function better on very sharp curves and



because larger boilers can be used. They are employed in both freight and passenger service.

Another interesting type is the 2-8-2 + 2-8-2 modified Fairlie built in 1927 by Henschel & Sohn of Germany. These locomotives look like Garratts but the boiler, coal bunker and water tanks are all built on one heavy frame, under which the two units run as trucks. In the Garratt locomotive the forward water tank is integral with the front engine unit and the combined coal bunker and water tank is integral with the rear engine unit, with the boiler swung between them.

The system's excursions into the realms of high power include three 10-coupled classes—and 10 coupled wheels are a lot for 3′-6″ gauge. The first of these classes is made up of the powerful 2-10-2's built by Henschel & Sohn in 1928. With a tractive effort of 53,650 pounds, they are still the most powerful non-articulated locomotives in service on the SAR. Light 2-10-2's were built in 1935 at the Pretoria shops for use on branch lines laid with 45-pound rail in Southwest Africa. Latest 10-coupled class is a 2-10-4 type introduced in Transvaal in 1937. Built by the North British Locomotive Company, these engines are for use on branch lines laid with 60-pound rail. They can negotiate curves of 275-foot radius despite their long coupled wheelbase.

Many Pacifics are in use, mostly on the long, straight, easily graded sections of the karroo and veld where high speed can be maintained. Other types in use are 4-8-0's, 4-6-0's, 2-6-4's (a rare type) and some types of tank engines.

Some double-truck type Diesel-electric locomotives were introduced in 1939 for light freight and emergency trains as well as for switching.

A single type of electric locomotive is used for all classes of trains, from slow freight to mail. These are B—B's, and there are 140 of them. Except for three of German make, all were built in England. Ninety-five went into service in 1925 and 1926, and the rest were added since 1937. The original design proved so satisfactory that, except for alterations in detail and layout of equipment in order to incorporate later progress, the design was duplicated on later orders. Multiple unit control and regenerative braking are incorporated. The engines have a simple symmetrical appearance with a prow-shaped front. As their main job is heavy freight haulage, they have a maximum speed of 45 miles per hour. They are usually paired or tripled.

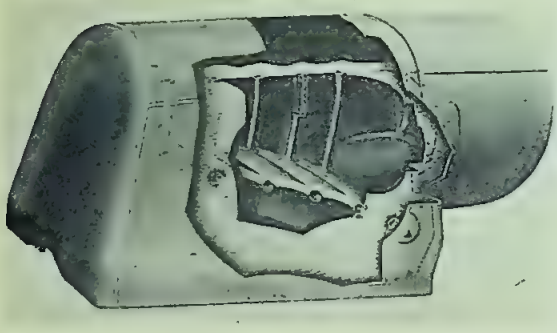
Exceptions to the general type of electric locomotive are a few used solely for switching. These are also B—B's but have steeple cabs.

Although general offices of the nine subordinate systems which make up the SAR are scattered at Capetown, Bloemfontein, Johannesburg, Durban, Port Elizabeth, East London, Pretoria and Kimberley, the entire system is under the control of the general manager at Johannesburg. Also under his control are the seaports, a highway transportation service covering more than 15,000 miles, and the South African Airways, which operate all the air services in the country. Whatever may be the arguments against this policy of nationalism and concentration of a nation's transport under one management, it must be admitted that it simplifies the task of co-ordinating the various forms of transport and seeing that each is able to operate within the sphere for which it is best suited with a freedom from obstruction and an absence of that uncertainty which worries most managements. South Africa has made tangible recognition of the fact that all forms of transport are parts of an indivisible whole.

Above, left, double-heading Beyer-Garratt locomotives swing past the great cones of gold-ore refuse west of Johannesburg. This photo was taken from a car on a train from Johannesburg to Mafeking, Bulawayo, and Victoria Falls. Notice single tight-fitting guard rail on track in foreground. Left, builder's photo of a Garratt locomotive. Right, before electrification of suburban service, this commuter train ran behind a 4-6-0 from Capetown to Muizenburg. Multiple unit cars are now used.

Security Circulator

The Security Circulator is a recent type of steam generating and water circulating element for locomotive fireboxes. Circulators are water conducting pipes arranged in series in the firebox. They connect the side water legs (the space between the inner and outer sheets of the firebox in which water circulates) and the crown, which is covered with water and forms the roof of the firebox. The circulators cause water to flow over the highest part of the crown sheet even after the safe water level has been lowered unduly, eliminating dangerous dry spots and increasing the total evaporating area. Besides serving as strut braces to prevent collapse of the firebox, they support the brick arch that divides the firebox



into two compartments: furnace and combustion chamber. The presence of circulators in the firebox reduces honeycombing or invisible checks inside the sheets, flue plugging, and cinder cutting.

The crosswise position of the pipes lessens distortion and mechanical strain on them. Each circulating unit is a triangular-shaped set of tubes made of stainless steel, annealed and pickled to resist the chemicals in the firebox. Crossarms are 5½ inches outside diameter, risers are 7 inches outside diameter, and the walls of the firebox ⅜ inches thick. Each unit is made with an interlocking unit at the crotch joined by a four layer weld. The risers project slightly above the crown sheet and the crossarms form a lap at the side sheet flange connections. Handhole covers are placed directly opposite the side arm connections, but there are no plugs on the crown sheet.

Completed units are stress relieved, then hammer tested at 900 pounds hydrostatic pressure, and finally inspected at 1200 pounds. Since a properly flooded crownsheet will not become dangerously overheated, the Security Circulator is as much a safety device as an efficient method of heating water.

Busy Spot in Pennsylvania

Another mecca for the railfan is in north-central Pennsylvania, around Williamsport and Newberry Junction. Here may be found many types of power, and a sufficient number of trains to keep most anyone happy. The Pennsylvania's Williamsport Division is the chief passenger line through the city, and in addition the PRR has a freight cutoff which permits all through freights to bypass the town. Running north from this point is the Canadian branch. The Reading and New York Central team up at Newberry Junction to offer through freight service between Philadelphia and Chicago, as well as various other points. Reading 1700's and Mother Hubbards do most of the work, while the Central's 2900's are regular power on that line. Numerous scheduled freights operate on both the Reading and NYC, and it is seldom that something is not moving on one of the three lines.

1 Mile = 500 Yards

Proctor & Gamble in Cincinnati had to move five huge tanks about 500 yards down the street when they were enlarging a building. Moving them via the street would have meant the removal of all telephone poles and two overhead structures carrying pipes, for they were 30 feet tall and 30 feet in diameter. It took three good-sized dollies, several 12 x 12 braces and three weeks to move the first tank. Then the idea of using rail facilities took shape. Directly across the street is the westernmost track of the Norfolk & Western, its interchange with the New York Central. The tanks were placed on the 12 x 12 and the dollies as before, but this time they were hauled across the street and astride the tracks. Here a NYC Class U-3e 0-8-0 backed a flat under the tank. It was lowered and secured for the trip. It traveled less than one mile per hour over the N&W, NYC and P&G trackage to its new site. The NYC placed it on the P&G lead and a P&G 0-6-0 picked it up from there. It traveled about a mile in covering the 500 yards. Estimated weight was 40 to 50 tons.

"Bring Back My Body to Me"

An old Negro announced to the young lady at a ticket window, "I wants a round trip ticket to Looeyville fo' a cawpse."

"A round-trip ticket, Uncle, is a ticket that takes you where you want to go and then brings you back to where you started. It's a two-way ticket."

"Yes, Miss, I knows it is," the old man interrupted. "Dat's why I wants a roun'-trip ticket."

"But if you want to send a corpse to Louisville, you just buy a one-way ticket, Uncle. The one-way ticket will take the body right on to Louisville," she assured him.

"But I want a two-way ticket, Miss."

"Why?" It was as much as she could manage at this time.

"Because they's 17 relatives o' this here cawpse dat lives in Looeyville. An' all 17 o' them relatives wants to view the body."

"Well, that's all right. You still just need a one-way ticket."

"No, ma'am! This cawpse has gotta be buried right here. An' I ain't gonna have dem 17 relatives comin' down here an' stayin' at my house an' eatin' up my food. I'se gonna send this body to Looeyville an' let 'em view it; an' then I'se gonna bring it back here for burial. I wants a roun'-trip ticket."—*Rio Grande News Bureau.*

Management's-eye-view of the Santa Fe

View from fireman's seat inside cab of one of Santa Fe's great fleet of Diesel locomotives. Engineer sits at right.

Many of the fine things you are enjoying and are about to enjoy on the Santa Fe are the direct result of riding the line rather than riding an office chair.

You can see more railroad from the cab of a locomotive than you can from a typewritten report. It all goes to prove that foresight is better than hindsight.

That's why you so often find the top executives of Santa Fe at the "head-end" of Santa Fe trains. They ride in front by desire and by design to see what lies ahead.

The modern railroad executive, who has grown up with tracks and trains and who has spent a large part of his life in railroading, looks at a section of track not in terms of ties and rails but in terms of the possible improvements for better service to shippers and passengers.

Coupling long experience with mature vision, he translates new ideas into action with immediate decision which is both practical and timely.

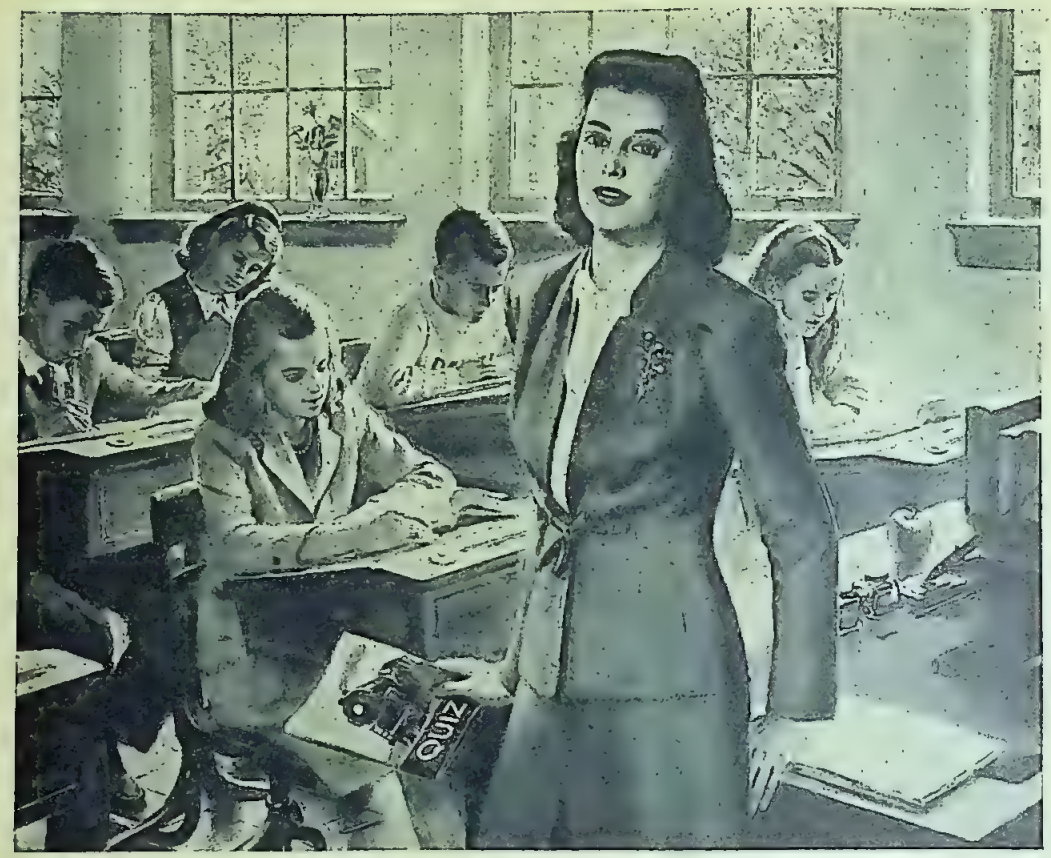
This practical "Management's-eye-view" has led to the straightening of curves, improved roadbeds, new bridges and many other things which pay off in terms of better service for both passengers and shippers. It has led also to improvements of design and handling in the locomotives themselves.

From time to time during the next few months, Santa Fe will announce a number of new features improving its service and equipment. Watch for them.

SANTA FE SYSTEM LINES

Serving the West and Southwest

Santa Fe



"I'd like to suggest a fourth 'R'"

"'Readin' and 'ritin' and 'rithmetic' were about all that children learned in the days of the little red schoolhouse. Today we cover a lot more ground. And classroom projects on transportation form so important a part of our studies these days that this fourth 'R' of mine would stand for Railroads.

"Our young people have learned that the railroads are an important partner in the business of living . . . Because only the railroads have the enormous carrying capacity required to transport most of the food the children eat, the clothes they wear, and the things they need and use every day.

"Yes, 'R' for Railroads means a real partnership — one which has been firmly interwoven into the pattern of our American life."

The partnership of the American railroads with the American people reaches deep down into thousands of towns and villages all over the nation, for the railroads are a home-town partner in every community they serve. They employ local people, buy supplies locally, own local property and pay local taxes on it.

These railroad taxes are the same kind as those *you* pay. They are not spent on railroad equipment but help support local public services of all sorts, including public health, fire and police protection, and public schools.

Last year railroad taxes alone paid for the education of more than a million children throughout the United States.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.

IN PARTNERSHIP WITH ALL AMERICA

"LAST CALL FOR SUMMER VACATIONS"

YELLOWSTONE

ZION, BRYCE
GRAND CANYON

WISCONSIN, MINNESOTA
UPPER MICHIGAN

"North Western's" famous vacation menu is as tempting as ever. If you haven't "ordered" as yet, better do so soon. Summer is well on its way and, before you know it, will be a thing of the past.

What's on this season's menu? The good old standbys: Cool, mountain-peaked Colorado; magic Yellowstone; Southern Utah's great 3-for-1 Wonderlands—Zion, Bryce and Grand Canyon National Parks; California and the "air-conditioned" Pacific Northwest; the Black Hills of South Dakota; the lakes-and-woods country of Wisconsin, Minnesota and Upper Michigan.

It's an outstanding vacation menu, and not the least of this treat are the splendid air-conditioned "North Western" trains that carry you in comfort to your destination.

CHICAGO and NORTH WESTERN SYSTEM

E. L. Pardee, Passenger Traffic Manager
Chicago and North Western System
400 W. Madison St., Chicago 6, Illinois

PIONEER RAILROAD OF CHICAGO AND THE WEST

CHICAGO and NORTH WESTERN SYSTEM

In plain words:

Yard Geese=

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(WORKERS IN RAILROAD YARDS)

In any language:

A Great Railroad!=

FRISCO LINES

ST. LOUIS-SAN FRANCISCO R.Y.

All along the line you hear about the millions Frisco is spending to bring you the smartest, most dependable, most comfortable travel . . . the fastest, most convenient freight service that money can buy. Coming soon are Frisco's new Diesel-powered super-streamliners, the Meteor Flash and Texas Special . . . Watch for their inaugural dates!

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WOODBURY HEIGHTS • NEW JERSEY

a Giant's Job demands a *Giant*

An illustration of the stupendous job the railroads are doing is the record of the Southern Pacific. Toward the close of 1945 its passenger traffic was running about six times its prewar passenger miles, while the ton-miles of freight hauled in 1945 nearly trebled the amount carried in 1939.

Such a record was made possible by the employment of steam motive power, such as the Lima-built Southern Pacific's 4-8-4's and 2-8-8-4's, capable of handling the heaviest trains at sustained high speeds.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, INC.
LIMA, OHIO

RUNNING EXTRA

Helen Mary Madden, editorial secretary to TRAINS staff, came into this column's cubicle one morning recently and said, "My husband just had his first baby." Now, a thing like that coming from an Irish colleen the likes of Helen Mary could only mean, b'jabbers, her husband did just have his first baby. And it did not take long for that fact to become established because Helen Mary's husband, name of Bill, was, only three weeks prior to the baby event, graduated from Marquette University as an M. D.

Just between us boys we think Bill has quite a baby for himself — meaning Helen Mary. She's pert, hazel-eyed, vivacious and altogether a lovely young lady. She can type with speed and accuracy the like of which is a pleasure to see. Since we've already mentioned Bill you might be interested to know that he completed his undergraduate study while in the army, that he's as tall as a mountain, broad-shouldered as a heavyweight, and as pleasant a guy as you'd ever want to know. The going has been rather rugged for both Helen Mary and Bill these past few years but their determination to have a shingle outside their residence read, William J. Madden, M. D., pulled them over the tough spots. The hanging of the shingle is still a couple of years away because Bill has to sweat out his internship. But when it happens we reckon there will be no one who knows Helen Mary but what will think to himself that the seven or eight years Bill put in for that shingle were a lot easier to endure with Helen Mary backing him. She's that kind of a girl.

In a couple of years Helen Mary and Bill will establish residence in Racine, Wis. Meanwhile, those on TRAINS staff who have worked with Helen Mary the past year agree that if all secretaries were modeled after ours, business and pleasure would be automatically combined.

Railroad

Lidgerwood Service

About 1912 I was firing a work train job for the NP out of Pasco, Wash., where a Lidgerwood was in use. A cable from the drum of the Lidgerwood machine was stretched along 18 or 20 cars of gravel and the free end attached to a small wedge plow. The cars had ends which dropped down to form a continuous platform from one car to another, and the sides were hinged at the top. At a given signal the Lidgerwood engineer would reel in on the cable, drawing the plow and crowding the ballast off through the swinging side doors. One night we were on the siding at Connell, Wash., when a train stopped there. The brakeman lit his fusee when the train was about ready to leave. Now that was also the signal the work train foreman used for the Lidgerwood engineer, and "Lidgerwood Bill," being on the job, promptly reeled in and unloaded 20 cars of the NP's best ballast on the station platform.

C. M. Graham, engineer, 1201 8th St., Las Vegas, N. Mex.

When, Is Right

While I was inspecting the shops at Sydney it was suggested that I might like to go over and pay a visit to the near-by Zoological Gardens. I told them it was hardly worth-while because I had found sufficient fauna on tap right in the yards what with "alligators" guiding the crossheads, "butterflies" hovering over the firebox doors, "cranes" on the breakdown train, "frogs" sprawled out at the switches, a Stephenson "lynx" crouching under the boiler, "fish" plates hugging the rails, hump riders coming in on "camel" backs, a "monkey" wrench holding on to some nuts on a "cow" catcher, a "donkey" engine that stayed put — and I hope all your models are "lion-els." Whew.

Courtland Christiani, Perth, Australia.

On the Continent

Here in Southern France, the main lines are in fine shape, well ballasted, well maintained, bigger engines, faster operation, and better equipment. The signals give me the willies: wires, pulleys, ropes, chains, weights, counterweights, springs, ratchets, arms, turnbuckles, levers, rods, odd-shaped plates that face or do not face traffic. Have seen much left-handed operation. The shrill whistles still beat me. What a pleasure to see and hear the Lima, Baldwin and American Mikes. Most deadly are the couplers. As far as I know, they must be coupled with a man dropping a link over the hook. Many four-wheel American-built cars look huge beside French, German, Italian and Netherlands stuff.

Capt. Alex L. H. Darragh, U.S. Army.

For Steam Fans

Recently I made a trip from Montreal to Ocean City, N. J., and was hauled by quite a variety of motive power. The *Washingtonian* is now so heavy that a Canadian National 6200 4-8-4 pulls it from Montreal to White River Junction, Vt., instead of the Central Vermont's 4-8-2's. From White River Junction to Springfield, Mass., we had a newly decorated Boston & Maine Pacific type, with its streamlined cab numbers in special paint, outlined with red high lights. The road's name has also been dressed up on the tender in modernistic lettering in bold color combination. From Springfield to New Haven we had one of the New Haven's newest Diesels. At New Haven we coupled onto the New Haven's older streamlined electrics for the run into New York. From New York to Philadelphia we had, of course,

Mail

the Pennsy's old regular electrics. Then a trip across the Delaware at Philadelphia to get the Pennsylvania-Reading Seashore Lines at Camden, N. J. We had an Atlantic on this run to the seashore.

W. A. B. Davidson, Box 304, Station H., Montreal 25, Que.

Diesel vs. Steam

I take exception to some impressions which the average layman would probably gather from the article about the conversion to Diesel power on the Susquehanna (July issue). I do not contest the fact that Dieselization represented the most economic motive power for the conditions on the Susquehanna, but I do take issue with the comparisons between steam and Diesel which the writer offers. Consider the extreme age (average, 37 years) of the locomotives the Susquehanna was using, and their basic design, which made them usable in only one class of service. Modern dual-service steam power could have made an impressive showing. The initial investment would probably have been less, and with coal as fuel this bill should have been equalized. If oil should ever become scarce, and expensive, the absence of water towers, coaling stations and shop forces equipped to handle steam power will hardly console the managers of those lines now following the Susquehanna's example.

Pfc. David P. Morgan 45011641, Finance Office, Boca Raton Field, Fla.

Rebuttal

We railroad workers never got one red cent extra (or even "Thank you; you did a fine piece of work") for handling thousands of carloads of high explosives for which the railroads got exhorbitant tariff; the manufacturers, the longshoremen and all others received large bonuses. We handled all these cars as if they contained coal, shingles, wheat, or some other ordinary commodity, except that we obeyed the company's and the I. C. C.'s rules governing the handling of such freight.

William A. Bremner, 2501½ Maple, Everett, Wash.

Service

Worth relating is this incident which happened on the morning interurban between Bethany, Okla., and Oklahoma City. The operator signaled at a certain highway crossing and stopped. Nothing happened. The operator looked across the road and intently watched a particular house. He signaled a couple more times, then left the car and ran for the house, several hundred feet distant. Learning that the man of the house was not going to work that morning, he ran back to the car, boarded it, and got under way.

L. H. Kenney, 19727 Faust Rd., Detroit 19, Mich.

Likes Technical Articles

In answer to George Kottke (Railroad Mail, April issue), I personally appreciate an occasional technical article. It gives the mechanically minded railroad fan (there are probably many of these) the information he often desires.

Allen Bauer, 2008 Maumee Ave., Ft. Wayne 4, Ind.

Whistle Tones

Why does a Santa Fe whistle (of recent series) sound a full imperious chord; a B&O passenger whistle sound long, low and leonine; a Pennsy whistle usually so diabolically out of tune that it buzzes your teeth; a UP Big Boy or passenger engine of the Southern like an organ chord, and a Southern Pacific whistle so lonely and woebegone?

Homer L. Horst, 3025 W. 5th St., Los Angeles 5, Calif.

SECOND SECTION

Tunnels have come into their own. In the past, apparently, no one has paid much attention to tunnels. They have been built, trains have run through them, and once in a while a newspaper has featured an event such as the building of the Moffat or the Hoosac that has local interest. It was not until this year that railroad tunnels actually gained much recognition. The May issue of TRAINS carried the story "Railroad Tunnels" by Stuart Covington as its lead feature. Then along came the June issue of *Railroad Magazine* with a story called "Tunnels" by Henry B. Comstock. And, as if to make sure that the subject was thoroughly covered, the June issue of THE MODEL RAILROADER featured an article on railroad tunnels by Richard Houghton.

* * *

It's strange, but ever since the big railroad strike we've heard very little about how well the country could do without railroads. During the strike, users of such off-line post offices as Muskego, Wis., were as aware of the strike's effects as were the railroads themselves. Muskego mail is always delivered to the post office by truck, but the truck must first get the mail from a train.

* * *

We have a few suggestions to offer regarding those making appointments with people living in cities where there is daylight saving time. Why not make it a point to be definite as to the time of arrival and be certain that the time you state takes into consideration daylight saving time or a time zone change? If you are traveling between states, and your point of destination is affected by a time zone change plus daylight saving, a lot of trouble can be avoided by mentioning that your hour of arrival is figured in accordance with railroad standard time.

* * *

If it takes 45 minutes to go from Baltimore to Washington on the B&O's National Limited, how long did it take to make the same trip in 1851? And if it costs 88 cents to make the trip today (not including tax), how much did it cost in 1851? You'll find the answer to these questions on page 27 of the 1851 American Railway Guide and Pocket Companion, reproduced in facsimile by Kalmbach Publishing Co. 160 pages plus folding map, this gem of reproduction, accurate even to the typographical errors, is available at $1 postpaid. For the benefit of those who don't have a dollar, the answers to the questions above are: (1) 1 hour 50 minutes; (2) $1.80. You're welcome.

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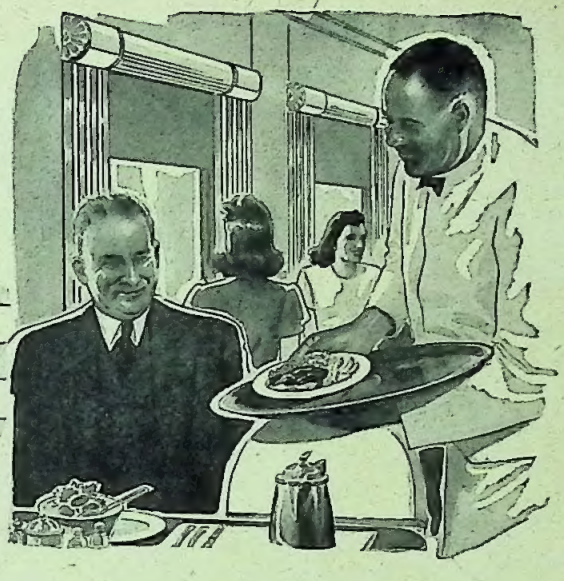

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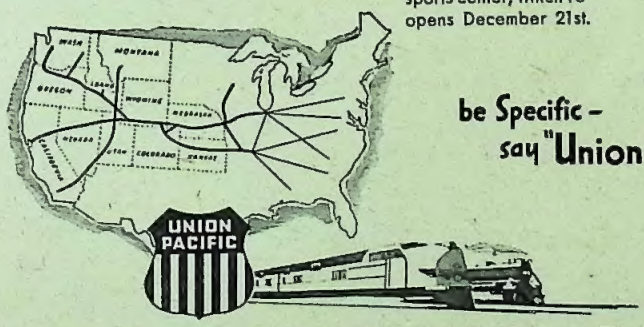

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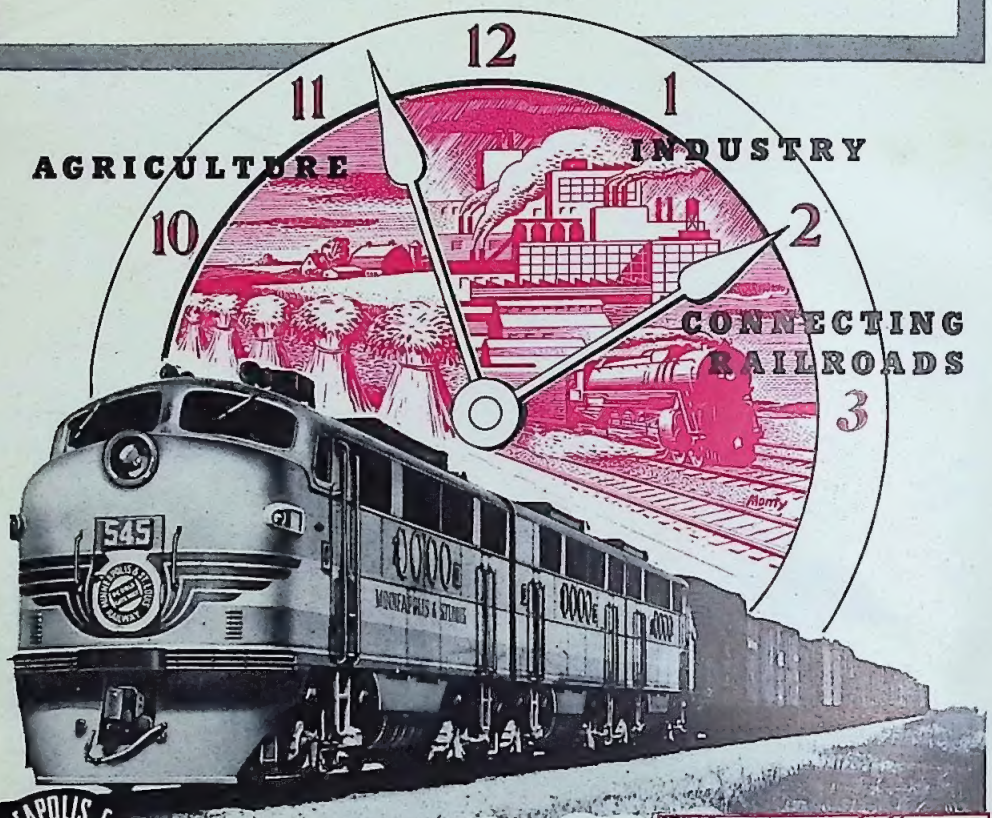

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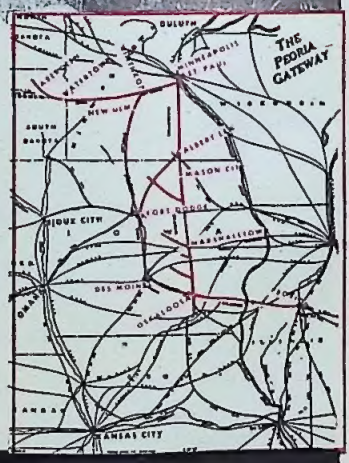

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